SOCIAL-EMOTIONAL COMPETENCY - ENHANCING the ACHIEVEMENT ABILITIES of DEAF and HARD-OF-HEARING PERSONS

by

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SUMMARY

South Africa has a dearth of deaf appropriate assistive resources – giving rise to deaf adolescents leaving school early and poor adult outcomes. These factors are negatively influenced by the interaction of other elements such as the inadequate cultural and social nurturing and lack of support. Approached from a bio-ecological model, to pro-actively address the support needed by deaf and hard-of-hearing persons to empower them to develop the capacity to withstand the challenges they have to endure, to stand up to and resist the negative ideas about what they are capable of. In this study, major risk factors were identified as communication deprivation and unpreparedness of parents to raise a deaf child appropriately where mediating factors were identified as social-emotional competence and deaf teaching assistants at South African Schools for the Deaf. The main findings of this study were that the need for early training of parents, access to Sign Language, deaf role models and social-emotional training in SA schools for the Deaf are proposed pathways to well-being.

KEY TERMS

Cultural Deaf; Audiological Deaf; Hard-of-hearing; Hearing Impaired; Speechreading; Sign Language; Well-being; Social-emotional Competence; Adolescents; Bio-ecological; Deaf Teaching Assistants

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Introduction

Research Motivation

While raising my son, who was born deaf (congenitally deaf), I experienced the abject dearth of deaf appropriate assistive resources – inclusive of early childhood development intervention, parental guidance, the lack of contextually relevant schooling, workplace problems, as well as a need for mental health services - which I have personally experienced raising a deaf child - motivated the theme of my Master's Study. This has brought closer the understanding of the absolutely deficient contexts within which the average South African deaf child's development is left to merely 'occur' by happenstance and how such insufficiencies place the deaf child at risk in almost every aspect of their lives. It also contributed to my increased awareness of the crucial need to more pro-actively address the support needed by deaf persons to empower them to develop the capacity to withstand the challenges they have to endure, to stand up to and resist the negative ideas about what they are capable of.

Research Aim

This has led to the exploration of the often-overlooked relationship between social-emotional competence and enhancement of the deaf individual's chances to achieve well-being, and how constructive improvement of this vital bond would markedly better a deaf person's life.

Research Context

Empirical research shows that deafness, per se, does not impede a child's cognitive abilities (Mayberry, 2002), academic success or failure and/or psychological well-being. These factors are however negatively influenced by the interaction of other elements such as the inadequate cultural and social nurturing and lack of support from

appropriate authorities to which they fall prey (Calderon & Greenberg, 2011).

Extensive research undertaken since the 1970's has determined a strong positive correlation between a deaf child's language ability (verbal or signed) and his/her social-emotional maturity and academic achievement (Greenberg et al., 2000). Social-emotional competencies are learned skills which are acquired through interaction with others and through incidental learning (Greenberg, 2006).

The home environment to which deaf children are first exposed too in respect of communication especially plays a crucial role in their later development.

Ninety (90) percent of Deaf children in the world are born to hearing parents, South Africa being no exception (Swanepoel et al., 2009). Hearing parents, however, often do not have sufficient intimate knowledge and suitable means (e.g., poverty, illiteracy, and beliefs) to introduce or provide to their deaf child the appropriate learning environment. Most Deaf children in South Africa when commencing school at the age of 3 or 4 years (and others as late as 11 years old), start with very little or no language ability and with delays in social, emotional and cognitive skills largely due to social isolation, language deprivation and inadequate stimulation in the home environment during the formative years (Batchelor, 2010; Parkin, 2010; Storbeck, 2012). Commencing school at the age of 3 years is thus preferable for a deaf child without communication at home – provided that the quality of teaching is such that the child can benefit meaningfully. Unfortunately, and taking into account that the larger proportion of these children do in fact reside in school hostels, the reality in South Africa is that the negative experiences of these children are often perpetuated by the lack of skilled professionals and specialised programmes for the deaf (Batchelor, 2010). Such

circumstances invariably can lead to more negative consequences. For example, it has been found that deaf children residing in school hostels (or residential schools) tend to display insecure attachments, manifesting in dependent and immature behaviour that later results in complications and difficulties with socialisation and the forming of sound inter-personal relationships (Edmondson, 2006).

Since most deaf children are full-time residents in hostels at the 39 schools for the deaf in the country and only go home during school holidays (if encouraged by parents to do so, and if affordable), the school becomes the most important – if not only, personal influential environment in the deaf child's development process. The school is undoubtedly thus the most logical and crucial point at which to nurture, cultivate and impart social-emotional competencies to the deaf child. If taken into account that deaf children spend the greater portion of their very existence as youth at and in school, enabling them to effectively deal with and resolve possible peer confrontation and conflict occurrence, build robust learner-educator relationships and obviate mental health dysfunction through inculcation of apt social-emotional skills in the formative years, is critical to their sound development, well-being and ultimately, success in life.

When the South African Schools Act was implemented in 1997 it caused most "clinical staff" to be phased out of the Schools for the Deaf (Smit & Henderson, 2010). Except for the odd social worker, it left these schools unable to fittingly support deaf children experiencing emotional, learning, and mental health problems. Although some of the schools for the Deaf in South Africa currently may have a social worker in their employ, mental health incidences and learning problems of deaf learners invariably go undetected and untreated more often than not. Due to the virtual non-existence of mental health care professionals familiar with the Deaf domain in South Africa,

significant barriers are encountered when a deaf child (or adult) needs to consult a psychologist, with misdiagnoses often made when they do (Smit & Henderson, 2010).

Emphasizing the above discussed circumstances, is the planning by the authorities followed during the Covid-19 pandemic which completely bypassed the rights and well-being of the deaf person. As the law required, all schools closed - schools for deaf learners included. But, for them it meant complete communication deprivation, social isolation, and no accessibility to resource support (such as mental health services and school lessons via internet).

Their needs have been entirely overlooked, in their microsystems (home), and also in their macrosystems (the wider community). The reality for many deaf children at home, is alarming: most parents of deaf children in South Africa have no knowledge of Sign Language and/or the deaf culture. In the majority of homes communication is done through gestures based on the parent's spoken language (Batchelor & Swanepoel, 2010). Outside of home, which include medical and mental health support, for deaf people who can manage speechreading (also referred to as lip reading) and Sign Language, the forms of protection - including social distancing and masks, made communication with others impossible. Speechreading is perceived visually, and for it to be possible, the mouth and face of the speaker has to be clearly visible to the listener, and even then, speech is only visible to a maximum of 25 - 30% (Knoors & Marschark, 2013). Deaf individuals use the nonverbal context (such as lip patterns and facial expressions) to fill in the gaps inherent in visual speech perceptions (Knoors & Marschark,

2013; *Covid-19*, 2020). People with a hearing loss, using lip reading and/or Sign Language, are all affected by the use of face coverings.

Sign Language has five parameters or elements, which is similar to "phonology" in spoken language, with SASL being no exception. ◦The five parameters/elements are the shape of the hand, where in relation to the body the sign is made, palm direction, movement, and non-physical features (non-manual), including body language and facial expressions (*Real South African Sign Language*, 2020). Changing one of these parameters when signing, will also change the meaning of a sign. Sign Language is more than just linguistic information, it is emotional messages too (Callahan, 2020). Whynot, the director of the American Sign Language (ASL) Program at the North-eastern university, USA, explained that wearing a mask while signing, "is like listening to a muffled message" (Callahan, 2020). 60-70% of Sign Language communication rely on lip patterns and facial expressions (Grote & Izagaren, 2020). That is because "movements around the mouth—the puffing of cheeks, or the pursing of lips, or a sort of grimacing, showing of teeth" are used to qualify information (Callahan, 2020).

A significant negative impact on the social and communication needs of deaf and hard of hearing persons has been caused by forcing all to wear masks. Deaf and hard-of-hearing people are becoming even more isolated, risking them to develop mental health problems they have no support for.

Research Statement

Social-emotional competences not only serve as basis for later competencies to build on, but are critical for deaf children's achievement, directly influencing their learning (Knoors & Marschark, 2013), and also in enabling them to take control and give direction to their own lives and ultimately their well-being. Relations among social-emotional competence and well-being have been studied for hearing children, but it has not been done so far for deaf children (Knoors & Marschark, 2013).

There are various risk factors, leading to delays in the social and emotional development in deaf children, which could then lead to mental health problems throughout a person's whole life. Knoors and Marschark (2013) warns that this relation is nonlinear and complex, but that these risk factors are indeed more likely to occur in deaf than hearing children. The most influential risk factors identified are a deficiency in language learning and the family in which they are raised. Protective factors which were identified were coping and social skills of the person, interactions between child and parents, and factors relating to school. The studies they based their research on, were all done in Western countries and as far as could be ascertained, no such studies have been done in South Africa.

The first risk factor Marschark mentioned, namely hearing loss itself (Knoors & Marschark, 2013), constitutes an example of what the bio-ecological model terms as gene-environment interaction. This tenet holds that the genetic potential for social-emotional competence of children born deaf could be delayed or actualized by the proximal processes in their home situation they are part of on a long term basis (Bronfenbrenner & Ceci, 1994) or if not, directly taught at school through the implementation of structured social-emotional learning programmes.

From the background given thus far, it was posited that there are associations between certain individual and environmental characteristics, social-emotional competence, and well-being.

Firstly (1): Being older, higher grade, not using Sign Language at home, low and medium parent involvement will have a negative impact on social-emotional competence.

Secondly (2): Being older, higher grade, not using Sign Language at home, low and medium parent involvement will have a negative impact on well-being.

Definitions of Important Terms

Deaf (culture), Deaf (audiological), Hard-of-hearing, Hearing Impaired, Speechreading, Sign Language, Well-being, Social-emotional Competence, Adolescents,

Deaf - When spelt with a capital "D", the word "Deaf" refers to the Deaf culture, meaning a community of people sharing a language (Sign Language) (Storbeck, 2012). The "Deaf" person will identify with other deaf people.

Deaf (in the audiological sense) - When someone has no hearing at all.

Hard-of-Hearing - Generally used to refer to a partial hearing loss.

Hearing-Impaired - Used by some persons to refer to a hearing loss of any kind or to refer to hard-of-hearing. Many Deaf persons consider this term to have negative connotations.

Speechreading - This is when a deaf or hard-of-hearing person visually follow the movements of a speakers mouth and facial expressions.

Well-being - Subjective quality of life, where a person experiences more positive feelings than negative feeling with his life, in general.

Social-emotional Competence - In this dissertation, social-emotional competence was explained as containing five categories: self-awareness, social awareness, self-regulation, managing relationships and responsible decision-making (*What Is SEL?*, 2013).

Adolescents - A specific phase of development, generally between 11 and 18 years.

Subsequent Chapters

This section provides a summary of the content to be covered in the chapters of this dissertation.

Introduction

A review was done on the motivation for this study's theme. The circumstances surrounding the lives of deaf children in schools for the deaf in South Africa as well as those factors affecting their social and emotional development are discussed.

Theoretical background

The second chapter is a background review of the framework and theory used for the purposes of this dissertation. The reason for approaching the social and emotional development of the deaf child from within a developmental framework is discussed. Both social and emotional development occur over developmental stages and become progressively more complex. Each phase builds on the next which makes the successful completion of each phase all the more important. The developmental theory used as guide for this dissertation is found in the bio-ecological model and this chapter is concluded with a critical approach to it.

Literature study

Descriptions of what social and emotional competence entail are covered. Both social and emotional competence are defined and described as top-down approaches. Both concepts are viewed as covering all phases of development but becoming more forceful and complex with each stage. An exploration was undertaken into both the direct and/or indirect bi-directional influences of hearing loss on the ecologies of the growing deaf child and the influence it has on social and emotional competence or the delay thereof. The chapter concludes with a description of the impact social and emotional competence has on the ultimate achievement potential of deaf children.

Research methodology and design

Various issues compounding the complexity of deaf research are described in the opening of this chapter. The research design is described, including the sample and data analysis.

Results, Discussion and Recommendations

This chapter focuses on the research findings, a discussion thereof and recommendations.

Chapter Summary

The factors impeding deaf children's academic success and psychological well-being (although deaf children have the same cognitive abilities as typical hearing children (Mayberry, 2002) were discussed. The South African circumstances with sourly lacking deaf appropriate assistive resources, of which only a few are early childhood development intervention, parental guidance, contextually relevant schooling, workplace problems, as well as a need for mental health services, were explored.

The rest of the chapters will review the framework and theory of the dissertation- which is a developmental approach from within the bio-ecological theory. Social-emotional competence is described

and the impact it can have on the ultimate achievement potential of deaf children. Various issues compounding the complexity of deaf research are also expanded on, followed by the research findings, a discussion thereof and recommendations.

Theoretical Background

Social-emotional Skills Approached from a Developmental Framework

Following are elements of developmental psychology which are deemed important when considering social and emotional development. A developmental framework further emphasises child development as the complex phenomena it is with a wide array of integrated and interwoven influences.

Integrated Domains

Child development is often divided into the physical, cognitive, and social-emotional developmental domains (Berk, 2006; Cicchetti & Toth, 2014; Parritz & Troy, 2013). Although this dissertation is concerned with social and emotional development, the different domains are inextricably interwoven from a very young age and cannot be studied completely separately from each other (Berk, 2006; Cicchetti & Toth, 2014; Marschark, 1997). The themes and issues discussed are applicable to all the domains of human development, but will, however, in this paper be considered with social and emotional development in mind.

Diverse Developmental Outcomes

Important factors in developmental outcomes are biological factors (such as genetic inheritance, hormones and gender) and the environments (e.g., nutrition and the parent's educational standard) children grow up in and spends most of his or her time every day (Berk, 2006; Cicchetti & Toth, 2014). An example is that of a group of babies who had spent the first year in depriving orphanages in Romania, receiving no human interaction, warmth or caring. At the end of their first year, they were malnourished, and psychologically and cognitively stunted (Berk, 2006).

The child is also considered an active contributor and involved in bi-directional relationships with others (Berk, 2006; Cicchetti & Toth, 2014). These interactions (which Bronfenbrenner called proximal processes) has a fundamental impact on a child's life. Cohen (1999) identifies those interactions the child is personally a part of as interpersonal interaction (e.g., interaction at home with family, at school with peers and teachers and also significant others) as well as proximal processes within the greater neighbourhood, cultural and societal forces.

Risk and Protective Factors

One of the main aims of developmental psychology is to determine which factors make it more likely for children to develop disorders or delays (DeHart et al., 2004), or for the purposes of this dissertation, which factors place deaf children at risk for delays in social and emotional development. Emphasis is placed on determining what the risk factors are (for those who do develop the disorder) and what the protective factors are (for those who do not develop the delays or disorders) (DeHart et al., 2004). Risk factors are defined as any factor that is associated with increased chances of negative developmental outcomes (Humphrey, 2013; Reicher, 2010), such as poor literacy abilities, delay in language acquisition, poor academic outcomes, or mental health problems.

Three facts pertaining to risks are (1) it is a statistical rather than a causal concept, it is applicable to groups of people and not to the individual, (2) multiple risk factors' predictive power is much stronger than an individual risk factor would be and (3) the presence of protective factors play an important role in combating the development of mental health problems or in the maintaining of healthy behaviour (DeHart et al., 2004).

Change and Stability over Time

Development is often described as patterns of change, which occur over time (Parritz & Troy, 2013). It is also possible to change the course of developmental outcomes. Those children from the Romanian orphanages (described in 2.1.2) who were adopted by British parents who were nurturant and warm, tested similar in intellectual capacity as the average British child of the same age, after a few years (Berk, 2006).

It is the belief of many developmental psychologists that in some ways every period of life has opportunities for growth as well as declines in abilities, and that this continues throughout life (Parritz & Troy, 2013), while in some other respects behaviour will remain stable. This implies that no specific period thus governs all development (Parritz & Troy, 2013). The focus is on the way people change and grow, in which areas and during which periods, while simultaneously focusing on stability and how behaviour discloses consistency and continuity with previous behaviour.

Social and Emotional Competence from a Developmental View

Social-emotional competence develops from within relationships, for example if a mother is tuned in to her baby (e.g., picks him up when he is upset), a strong bond will develop between them which will increase the probability of the child having positive relationships later years. The whole system the person grows up in has an influence on the pathway a child's life will take (Greenberg et al., 2014). Social and emotional competencies develop in a certain order (Cohen, 1999; Greenberg et al., 2003; Greenberg & Kusché, 1998; Halberstadt et al., 2001). Some competencies are related to all social-emotional development phases, which Calderon and Greenberg (2011) divides into early childhood, middle childhood and adolescence, but the importance

of the specific skill will diminish or intensify depending on which developmental phase the child is in. For example, although interaction and relationships are important even for infants it is mainly with an important caregiver, where in the pre-school phase effective peer interaction becomes much more important (Marschark & Spencer, 2003; Waters & Sroufe, 1983). How successful a child masters the social and emotional skill of any specific phase, will determine how competent the child will be in the next phase. Previous and next phases will play an important role in future challenges and opportunities (Marschark & Spencer, 2003; Waters & Sroufe, 1983).

Deaf Children at Risk for Social-Emotional Development Delays

Mycklebust took the differences between deaf and hearing children in consideration. He expanded on the possible effects of developing without one of the senses:

> To be deprived of or have limited use of one of the senses means some of the available resources from which the mind develops, is missing. This will inevitably lead to, in the case of most deaf children, interaction with their worlds according to rules and different rules and limitations which is different than those of hearing children, and that these differences have a variety of significant implications for deaf children's psychological development (cited in Marschark, 1997, p.3).

In contrast with this, is the "bumper sticker phrase: Deaf persons are similar to hearing persons, only without hearing" (Storbeck, 2012, p.1), that has gained popularity during the past few

decades. This is correct when meaning to say that deaf persons are no less than hearing persons and are able of reaching the same achievements in life. However, to be able to support deaf children in an appropriate way, the question which should then be asked, is not "Are deaf children different from hearing children? but How are deaf children different from hearing children?" or more importantly "In what functionally significant ways does deafness affect the course of child development?" (Marschark, 1997, p.3) stressing the importance of keeping in mind that should neurological and other differences be found between deaf and hearing children, it does not necessarily imply neurological deficiencies, but that such differences might even serve to enhance cognitive proficiencies in various domains (Marschark, 1997). With these developmental factors as backdrop, the exploration of the development of social and emotional skills of deaf children can begin. But, to fulfil such a study in a scientific way, we needed to make use of a theoretical model as our guiding system.

The Significance of Theoretical Models

Theories are vital tools in research. Keenan and Evans, (2009, p.21) describe a theory as an "interconnected, logical system of concepts that provides a framework for organizing and understanding observations". By the use of statements and assumptions, theories transfer their messages to their users (Berk, 2006; Keenan & Evans, 2009; Miller et al., 2012). Therefore, a good theory will provide a systematic and logic series of statements about the observable facts or behaviours it is trying to describe, explain and predict (Berk, 2006; Miller et al., 2012). As an example, a good theory for emotional self-regulation (1) describes the behaviour of children around 3 - 4 of age as they try to integrate self-regulation as they socialize more with peers, (2) explains how and why some children find it difficult to

self-regulate and (3) predicts the consequences of having weak self-regulating capabilities. Through its delineations, a good theory will also facilitate the identification of the range of phenomena to which it applies. Without an in-depth knowledge of the assumptions of the theory in use, the meaning of such a theory might not be thoroughly grasped (Keenan & Evans, 2009). The function of theories is to guide the acquisition of new knowledge. It serves as a framework from which to interpret newly found facts and to integrate this new information with previously acquired knowledge. It further provides support in identifying relationships amongst those variables playing a central role in a given phenomenon, and also in identifying those variables which do not (Berk, 2006; Keenan & Evans, 2009; Tudge, 2009). Besides describing, explaining and integrating new knowledge, the statements of theories also make predictions which can be tested. A proper knowledge of a theories assumptions is thus also necessary in order to be able to evaluate it (Keenan & Evans, 2009). This serves one of two purposes: the first being to prove the theory correct again in other settings (Tudge, 2009) - Bronfenbrenner referred to this as the verification mode, which was the more familiar mode of research (Bronfenbrenner & Morris, 2006), or the second would be to prove the theories' assumptions incorrect - which may be due to influences by internal and external influences such as a researcher's cultural and/or belief system (Tudge, 2009). Bronfenbrenner and Morris (2006) agreed with the reasons given and added that if the research has proven the assumptions of the theory to be wrong, the researcher must necessarily produce new duplicate work, but which is more accurate. This will render the research more valid (Bronfenbrenner & Morris, 2006) and it would serve as a scientific base from which to bring about public policies and programmes which will be successful in positively intervening to

emergent developmentally disruptive influences. They called this the discovery mode of research (Bronfenbrenner & Morris, 2006).

By using the bio-ecological theory as a guide from which to investigate the development of social and emotional competencies of deaf children, individual as well as environmental influences from the various systems were conceptualised and the possible influences thereof on developmental change were explored. Bronfenbrenner's theory was used in this study – it is a systematic framework to identify those elements contributing to social-emotional delays and psychological distress experienced by deaf children in their development, within such context.

The Bioecological Theory: A Critical Evaluation

Bronfenbrenner's theory, named the ecological theory, was first published as 'Ecology of Human Development' in 1979. Bronfenbrenner continually reflected upon his theory (then, and his revised theory later) and it was perpetually in a state of evolvement. In the years following its release, and after repeated reassessments of the theory, Bronfenbrenner called some features of the original model into question. A noticeable change was made (albeit not a paradigm shift), in which those factors he changed as well as some new features were combined to form a new more dynamic model (Bronfenbrenner, 2005; Bronfenbrenner & Morris, 2006; Tudge, 2009). He renamed the theory the bioecological theory to place more emphasis on the developing person. Bronfenbrenner never focused exclusively on contextual factors. His theories were always ecological and inclusive of the interactions between the individual and his/her contexts (Tudge, 2009). The difference however between his earlier works and his later works lay in the emphasis he placed on the role the context plays. In his earlier works the focus was mainly on aspects of the context, shifting with his

later works to human development taking place as processes of shared relationships between an active growing person and his environment (Bronfenbrenner & Morris, 2006; Tudge, 2009). His concern was that when studying the context of development, there would be a failure to take into account the significant impact process, person and time leave (Newman & Newman, 2015), stressing the fact that his theory was still an ever-evolving scientific work which included not only the study about human development, but also the matching research designs (Bronfenbrenner, 2005).

The P-P-C-T Model

Proximal processes, person, context and time – as well as the active interactional relationships between them became the main elements of the bioecological theory (Bronfenbrenner, 2005; Bronfenbrenner & Morris, 2006; Tudge, 2009).

Proximal Processes. Bronfenbrenner made a very definite distinction between proximal processes and environment, not treating the two as the same concept as was often done in traditional psychology (Bronfenbrenner & Morris, 2006). He described proximal processes as the critical element of the bioecological theory, driving development (Bronfenbrenner, 2005; Bronfenbrenner & Morris, 2006; Tudge, 2008; Tudge, 2009), stating that proximal processes are specific forms of interaction, being reciprocal and becoming progressively complex development progresses. These processes take place between an active person who is constantly evolving as well as with items/things (objects) and symbols. The strength and effectiveness of these practices is determined by their frequency and whether they happen over an extended period of time, the context they take place in and the attributes and traits of the growing child or adolescent

(Bronfenbrenner, 1999; Bronfenbrenner & Morris, 2006). Bronfenbrenner also stated that although these bidirectional influences are most significant and strongest within the microsystem, they are not limited to the microsystem, but can occur or have an impact in all levels of environment (Bronfenbrenner, 2005).

In the micro level, every child needs a person in his life who will accept him unconditionally. This person will most likely be one of or both parents but can also be someone outside the family (Rhoades & Duncan, 2010). The importance of this relationship is that it is from this close bond that the child will explore the environment and engage in activities. These first activities then serve as basis for reciprocal interactions and from which new and more complex forms of investigation and exploration will take place (Newman & Newman, 2011).

Although the concept of proximal processes alerts us to their importance in driving development, the exact nature of these processes are not specified (Newman & Newman, 2015). One would have hoped that for the significance the proximal processes bear and their central position in relation to the theory, there would have been more specific targeting of these central mechanisms that contribute to advancing competence in one or more domains (Newman & Newman, 2015).

The Person. Both a person's biological and genetic characteristics were recognized by Bronfenbrenner (Bronfenbrenner, 2005; Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 2006). However, it is the personal characteristics a person brings with him/her to a social situation that Bronfenbrenner placed more emphasis on (Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 2006). These personal characteristics shape development by having influences on the psychological growth of a person (Bronfenbrenner & Morris, 2006). Three types of characteristics were identified: demand, resource, and force.

All three have an impact on which way it moves, and the strength of the proximal processes between the individual and the environment (Bronfenbrenner & Morris, 2006).

Force Characteristics. Bronfenbrenner distinguishes between two different kinds of force characteristics. Developmentally generative characteristics are behaviourally active and most likely to start and maintain proximal processes. Examples would be behaviourally-inducing characteristics such as curiosity, initiating play with peers and positively responding to initiatives by others. Developmentally disruptive characteristics makes it difficult to engage in proximal processes. Examples are on the one hand characteristics such as impulsiveness, aggression and violence, which relates to difficulties with impulse control and behaviour and on the other, includes characteristics such as lethargy, a general indifference and shyness (Bronfenbrenner & Morris, 2006).

Resource characteristics. These characteristics do not directly lead to action. Biopsychological liabilities and assets limits or improve the person's ability to successfully be involved in proximal processes. Being deaf or having a hearing loss will resort under resource characteristics. Some other examples include low birthweight, various disabilities, or brain damage. By contrast, developmental assets include intelligence, skills, and experience.

Demand Characteristics. Demand characteristics are those features that induce immediate reaction, for example age, gender or race. This set of characteristics can provoke or discourage reaction from other participants that, in turn, can interrupt or encourage processes of psychological growth. Examples of demand characteristics are a fussy as opposed to happy baby, socially curious or indifferent or hyperactivity in contrast to regulated (Bronfenbrenner & Morris, 2006). Newman & Newman (2015) however noted that psychological processes, which can

have a significant influence on a person's life, such as in respect of motivation, emotion and goals, was not sufficiently defined in the bio-ecological theory.

The Contexts. Bronfenbrenner (2005) described the environment as a dynamic and constantly changing influence, rather than being static and constricted. A person's environment can be perceived as a nested set of interconnected systems. The individual, with his genetic, biological and psychological characteristics, is at the centre of the system which encompasses four layers or strata, each representing a different aspect of the environment and each playing an important developmental role. A myriad of empirical studies have been done investigating the microsystems (e.g. peer-relations, school, and family) and mesosystems (Neal & Neal, 2013). However, empirical evidence concerning the influences of exo- and macro-systems on development still lags (Neal & Neal, 2013; Newman & Newman, 2011). In fact, where Bronfenbrenner had spent much time describing the macro system in some of his early works, he hardly mentioned it in his later ones (Rosa & Tudge, 2013).

The innermost level is the microsystem, generally confined to a person's immediate surroundings involving face-to-face activities (Rosa & Tudge, 2013). This could include relationships (interactions) with family, other care-givers, peers, and school or any environment in which a person spends much time or is constantly involved in activities (Berk, 2006; Bronfenbrenner, 2005), thus playing an important role in the child's development process. Bronfenbrenner also stresses psychological characteristics, as having an influence on proximal processes throughout the microsystem.

The Mesosystem. The second level of Bronfenbrenner's range of ecological systems is the mesosystem. The mesosystem refers to the relationships or interactions between microsystems in which a child

develops, such as at home, and in school and neighbourhood (Keenan & Evans, 2009). Bronfenbrenner emphasised that for these relationships or linkages – such as between parents and school, to benefit of the child, there needs to be mutual trust in which the different parties work towards the same goal, and there must be positive reinforcement (Keenan & Evans, 2009).

According to Leventhal & Brooks-Gunn (2000), besides the significance of the influence of parenting, families and neighbourhoods in the lives of the developing child, limited research has been done on both the associations between them and on the bigger mesosystem. Newman & Newman (2011) also point out that in his theory Bronfenbrenner gives no explanation of how to evaluate the importance of one setting over another in the mesosystem.

The Exo-system. The third level, the exo-system, are those environmental factors which influence the developing person indirectly. These involve the processes, relations and events between two or more settings within the immediate locale of the child, but in which the child may not necessarily be involved. The social networks of a child's parents, parents' workplace and community are exo-systems identified by Bronfenbrenner & Morris (2006) as most likely to influence the family.

The Macro-system. The level on the outside of Bronfenbrenner's model is the macro-system. This constitutes the culture or subculture of a given social context. The influence culture can have on a child's development, is profound. The way a child's surroundings are organized, and the manner in which a child is raised, stem from and are mostly determined by the culture of the parents.

Time. The introduction of the time aspect (to become a critical aspect in the theory), advanced Bronfenbrenner's ecological model the furthest beyond his previous work. Time involves frequency, duration and

exposure which constitutes a quantitative aspect (Bronfenbrenner & Ceci, 1994). Bronfenbrenner argued that when reviewing development, considering time indicated development as being a process of continuity and change. In his earlier writings, he condemns the general absence of the consideration of time in research on human development. Those models which did take time into account, were seen as making use of a chronosystem model (Rosa & Tudge, 2013). In chronosystem models, the time during which and the environment in which development occur, are treated as equally important. Occurrences from the external environment as well as from within the individual self (normative and non-normative) experienced by the child through his or her lifetime, lead to changes in the individual (Rosa & Tudge, 2013). As Bronfenbrenner stated: “They (these experiences) alter the existing relation between person and environment, thus creating a dynamic that may instigate developmental change” (Bronfenbrenner, 1989, as cited in Rosa & Tudge, 2013, p.250).

In applying the bioecological theory, the aspect of time was expanded yet further to include both developmental (ontogenetic) and historical time (Rosa & Tudge, 2013), as well as the sub-levels micro-time, meso-time and macro-time (Bronfenbrenner & Morris, 2006; Newman & Newman, 2011)

- Micro-time being the timing and duration proximal processes take place or not (continuity versus discontinuity) in an ongoing fashion - for example, the time taken for parents to teach their deaf child language.
- Meso-time refers to interactions and activities the developing person is part of over a long period of time. An example of this would be the number of hours children from disadvantaged circumstances necessarily attend weekly support programmes.

- Macro-time focuses on the changes or inconsistencies in the larger society, such as in an education crisis - and how reactions of developing children differ depending their developmental stage; in the attachment phase, for example, the interaction and reciprocity between baby and caregiver, having an influence on the developing child building trust in future relationships; and changes in the environment (Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 2006; Keenan & Evans, 2009; Newman & Newman, 2011).

Conceptualizing Social and Emotional Competence

Developing a definition of a given phenomenon is an essential scientific requirement (Humphrey, 2013). A definition or an understanding everyone agrees upon (Rose-Krasnor, 1997) will to a great extent lead to the set of boundaries of an investigation. It also impacts on measurements and interventions.

Social Competence

It is not an easy task to define social competence and over a century of research (Huitt & Dawson, 2011; Rose-Krasnor, 1997) has delivered a variety of conceptualisations. Researchers often use the term social competence as if they have the same understanding of what it means, but a shared definition has not yet been reached (Greenberg et al., 2014; Huitt & Dawson, 2011; Rose-Krasnor, 1997).

Top-Down Approach

A popular description of competence is as a skills-based construct, involving skills such as motivation, social assertion, peer relations, positive self-concept, and other skills. This is typical of the top-down approach. Those behaviours that are often subjectively believed to be representative of social competency are simply identified, and afterwards shared foundations sought (OECD, 2015; Rose-

Krasnor, 1997; Stump et al., 2009; Waters & Sroufe, 1983). However, many problems present themselves with the top-down approach to social competency: (1) Deciding which skills are representative of social competency is a major challenge; (2) A host of strategies proposed for identifying the appropriate skills have been found empirically attainable (Rose-Krasnor, 1997); (3) The "dynamic nature of social competency" contributes to the difficulty (Stump et al., 2009); and (4) Social competency has a cultural inclination and that which is deemed social competency in one social context, may not be deemed social competency in another social context (Stump et al., 2009).

In contrast to the top-down approach is the bottom-up approach:

A Developmental Approach to Social Competence

Waters and Sroufe (1983) used a bottom-up methodology and advocated a developmental approach to social competence. They described a competent individual as someone who "is able to make use of environmental and personal resources to achieve a good developmental outcome" (Waters & Sroufe, 1983). They found that this idea of competence can be traced back to Socrates, their concern however was that in defining competence as "the ability to use resources" (for example effectiveness) would likely lead to applying this definition as a skills-based concept.

Table 1

Definitions of Bottom-Up Approaches to Social Competence

Author	Definition of Social Competence
Waters & Sroufe (1983)	"the ability to generate and coordinate flexible, adaptive responses to demands, and to generate and capitalise on opportunities in the environment" from a developmental perspective. (p.2)
Rose-Krasnor (1997)	"an organizing construct, with transactional, context-dependent, performance-oriented, and goal-specific characteristics."
Bronfenbrenner & Evans, (2000)	"the demonstrated acquisition and further development of knowledge, skill, or ability to conduct and direct one's own behaviour across situation and developmental domains." (p.118)
Stump et al., (2009)	"effectiveness in interaction with explicit consideration of children's motivations and goals in the social arena."
White et al., (2012)	"ability to achieve personal goals while maintaining positive social relationships, rather than the simplistic notion of peer acceptance or popularity" and "ability to adapt effectively to different contexts, using a variety of social skills and behaviours." (p.312)
OECD (2015)	"The ability to meet complex demands, by drawing on and mobilising psychosocial resources (including skills and attitudes) in a particular context. For example, the ability to communicate effectively is a competency that may draw on an individual's knowledge of language, practical IT skills and attitudes towards those with whom he or she is communicating."

To obviate this, they proposed using Socrates' description, but from a developmental perspective. To conclude that an individual is able to appropriately manage daily circumstances, on his or her own, is not indicative of competent behaviour, unless it guarantees - or does not eliminate, developmental change. To explain this, they gave an example of an infant who may learn to withdraw from human contact when subjected to abuse or rejection, which may very well be seen as being

the management of the situation in terms of survival. However, when such withdrawal, excludes other adults and peers also, it would not be to the advantage of the child and thus not indicative of competence, and it will not lead to developmental change.

Closely associated with competence is the ability to co-ordinate affect, cognition, behaviour (Greenberg et al., 1991; Waters & Sroufe, 1983) and communication (Greenberg et al., 1991) in such a way that one can utilise the resources in a given environment and then gain by the experience. For example, during play or interaction with peers and when older, their integration into peer groups are the goal, which depend on their co-ordination of affect, cognition, behaviour and communication (Greenberg et al., 1991; Waters & Sroufe, 1983). Reciprocally the interactions with peers again provides a platform from which to practice and improve ability to co-ordinate affect, cognition, behaviour and communication, which in turn leads to good developmental outcomes. Good, where it means leading to satisfactory functioning with regard to the important issues for that specific age period and for transitioning to the following phase, and leading to developmental change (Greenberg et al., 1991; Waters & Sroufe, 1983). Waters and Sroufe (1983) placed emphasis on the environment, with the resources it provides as support, as an important role player in a child's short-term adjustment and in longer-term developmental outcomes.

Emotional Competence

Emotions and the Function thereof

Emotions are the most basic element of emotional competence and the development thereof. Emotion is described as a person's preparedness to change or to maintain personal goals, based on the subjective significance of the situation (Berk, 2006; Saarni, 2011). This can be described as a functionalist approach used by many

theorists (Berk, 2006; Denham, 2007; Saarni, 2011; Salovey & Mayer, 1990). Emotions generate actions or behaviours aimed at attaining or maintaining goals with a personal interest. According to this framework, the following elements are included in emotion:

- action – with communication as a key aspect.
- the preparedness or readiness for action; and
- assessment of the importance of person-environment transactions.

A person's subjective experience of events is never independent of the action that may be performed in respect of them (Saarni, 2011). Also, it is only those events in which a person has an interest in the outcome that will generate emotions (Saarni, 2011). An event can become personal to a person in several ways – for example, when the shy middle-school child has to deliver a speech in class it could provoke strong anxiety, or through the behaviour of someone else, such as when another child in pre-school grabs a toy, it could elicit angry behaviour. Also, a particular state of mind or sensation such as memory, sight, music, smell, can become personal to a person and prompt emotion (Berk, 2006; Denham, 2007). Emotion is a goal-driven sensation a person acts upon.

Components of Emotional Competence

In 1990, Salovey and Mayer, presented emotional intelligence as a subcategory of social intelligence, as was Gardner's viewpoint too, and conceptualised it as (1) the perceiving, appraising and expressing of emotions; (2) the employment of emotions to help thinking; and (3) the regulation of emotions in a manner that is both age and socially appropriate. Related to the concept of emotional intelligence is a set of mental processes, described as being the appraising and expression of emotions towards oneself and others; management of your emotions towards others; and using these emotions to adjust to circumstances

(Berk, 2006; Salovey & Mayer, 1990), emphasising that these mental processes are employed by all, but with individual differences in abilities and cognitive processing. They further saw advantage in well-developed emotional intelligence as leading to positive growth and adaptation and in facilitating thinking (Halberstadt et al., 2001). Although the significance of emotions (feelings) are still important, the emphasis has shifted from emotions being viewed as the core elements of emotional intelligence rather to the role of the functional aspects of emotional competence, and the dynamic underlying processes supporting the development thereof (Halberstadt et al., 2001; Saarni, 2001).

It is widely agreed today that the main *components* of emotional competence are still (1) expression, (2) knowledge of and understanding in, and (3) experience and self-regulation (Denham, 2007) of these skills that develop throughout life and employed in interaction with each other (Denham, 2007; Denham et al., 2011; Saarni, 2011). Deficits in any one of these skills can lead to problems – such as in describing the interaction of emotional skills, should a child experience a deficit in knowledge of anger and/or the self-regulation of anger, predictably difficulties will be encountered with teachers and peers in preschool (Denham, 2007), due to a tendency towards aggressive behaviour. Emotional skills also have a predictive relation to early school success (Denham, 2007). Employing emotional skills effectively in given phases, will lead to eventual emotional competence.

Defining Emotional Competence

Similar to social competence, the construct of emotional competence is a bottom-up or superordinate approach (Saarni, 2001) that subsumes a number of emotion-related skills. Saarni et al. (2006)

describe emotional competence as a level of function at which a child is able to effectively manage emotions in emotion-eliciting situations by accessing the necessary skills in order to do so. In concurring with this description, emotional competence "includes expressing emotions that are, or are not experienced, regulating emotions in ways that are age and socially appropriate, and decoding these processes in self and others" (Denham, 2007). Saarni was the first modern theorist to explicitly assert that "emotional competence is contextually anchored in social meaning" (Halberstadt et al., 2001, p.81).

Developmental Domains Integrated

Social and Emotional Development

Elias et al., (1997, p.2) define social and emotional competence as 'the ability to understand, manage, and express the social and emotional aspects of one's life in ways that enable the successful management of life tasks such as learning, forming relationships, solving everyday problems, and adapting to the complex demands of growth and development'.

As defined by Elias, *social* and *emotional* development are intricately intertwined and inter-dependent (Denham, 2007; Greenberg & Kusché, 1993; Halberstadt et al., 2001; Marschark, 1997; Saarni, 2001). This integration can best be described by the interpersonal functions emotions serve (Denham, 2007). The direction relationships and social interactions take, are determined by the emotional transactions within them which makes emotions central in social interactions (Denham, 2007; Halberstadt et al., 2001).

To illustrate: The main developmental pursuit task of pre-school children is to have ongoing pleasurable interactions with peers, while efficiently self-managing their feelings as well as beginning to act according to what is expected of them by persons other than their

parents or primary caregivers (Denham et al., 2011). This makes a pre-schooler's most important goal the co-ordination of play. To serve this purpose, certain social processes such as conflict management and activities they share an interest in, are of importance. While children are at play, differences may lead to arguments. To continue play, inherently a social activity, such arguments need to be resolved - which requires the use of the components of emotional competency (the clear expression of emotional messages, the understanding of emotional messages, and experiencing of emotional messages) (Denham, 2007; Halberstadt et al., 2001). By using these elements of emotion, specific skills such as listening, co-operating and negotiating can be employed applied to build successful social interactions (Denham, 2007). Social and emotional development are also closely integrated with language and cognitive development.

Language, Cognitive, Social and Emotional Development Integrated

Language is entrenched in every facet of a child's development. It is accordingly vital to consider the effect language interaction and language acquisition, or the absence thereof, has in the life of a deaf child for example. Language does not develop on its own, and it is thus important that when taking language into consideration it should be viewed in interaction with other developmental domains and also how language effects growth in or delays of social and emotional development.

In early development stages, localisation is established by neural connections created in the brain, new connections multiplying at an astonishing rate. Simultaneously, pruning commences to rid the brain of dormant neurons. This structuring of the brain develops with the simplest circuits developing first and building upon those, the more complex circuits (Damon & Lerner, 2008; Nelson, 2001). Although the

basic structural development of the brain is pre-determined by genetics or biology, it is early experiences which will determine the quality thereof. How a child's genes he or she is born with, develop, or even if some genes occur are expressed at all, is thus determined by the experiences within the contexts that the child grows up in.

Neural connections for different functions develop sequentially. During the production (proliferation) and pruning process, sensory functions (vision and auditory) form first because it is the simpler connections, followed by the more complex connections, such as early language skills and higher cognitive functions. When this happens is genetically determined, but the experiences the child is exposed to early on, will determine whether the circuits are strong or weak (Nelson, 2001). Lenneberg (1967) was the first person to postulate that language acquisition has biological tendencies. Numerous studies since then support his theory that to ensure optimal outcomes, spoken language must be acquired during brain lateralisation, otherwise known as localization. Those timespans when experiencing or suffering deprivation of essential experiences that have a profound impact on the brain and on behaviour, are known as critical periods (Berk, 2006; Knudsen, 2004; Nelson, 2001). There is belief that research has already provided sufficient evidence of the existence of critical periods (Berk, 2006). It is also theorised that with regard to new experiences occurring throughout a person's lifespan, the brain has the ability (called neural plasticity) to overcome developmental delays (Berk, 2006; Cicchetti, 2015; Knudsen, 2004). Critical periods and neural plasticity are, however, still controversial issues at best.

A profusion of behavioural studies over the past decades have provided proof that early language development deprivation inevitably leads to lasting consequences (Ramírez et al., 2013), even should new experiences for language acquisition possibly occur later in life.

Compatible to this view in the context of Sign Language, related behavioural research indicates that the age a deaf person first acquires Sign Language has a long-lasting effect on his/her eventual Sign Language proficiency. An early onset of Sign Language is associated with near-native language proficiency and a late age of acquisition reflected a reduced Sign Language comprehension and expression (Berk, 2006; Marschark & Spencer, 2003; Mayberry & Eichen, 1991; Mayberry et al., 2011). In cases where deaf children acquired very little or no spoken language before they learned Sign Language at an older age, the effects were particularly large, indicative of the critical period or stages for language acquisition (Mayberry et al., 2011). Also associated with recognition of the critical period for language acquisition, is the risk of neurological changes. It has been hypothesised that deaf children who experience a lack of language input in the early development phase, specifically before the age of three (Marcotte & Morere, 1990) are at risk for change in the left-hemisphere of the brain concentrating on language acquisition, in the form of acquisition distortion or that the ability may even disappear (Leybaert & D'Hondt, 2003; Mayberry et al., 2011).

The acquisition of language abilities as well as metalinguistic abilities, **biologically activate left-hemispheric** specialisation. It has been shown that when children processed their native language, those who received adequate language input from an early age, regardless of the language modality (spoken or Sign Language), showed more activation in the left-hemisphere processing than those who have been exposed later or less intensively to language. This evidence was obtained from neuroimaging – such as PET scans and fMRI, studies of brain lesions as well cortical language mapping (Arshavsky, 2009; Campbell et al., 2007; Ferjan Ramirez, 2013; Mayberry et al., 2011)

with Sign Language showing a slightly more scattered activation (Arshavsky, 2009; Campbell et al., 2007).

Brain lesion studies have also found that deaf native sign-language users with brain lesions in the left-hemisphere, who have used Sign Language from an early age and throughout their lives, have disrupted Sign Language comprehension (Mayberry et al., 2011).

In another study by Mayberry et al., (2011), the neural processing of simultaneous signed and spoken language acquisition (such as in the case of a hearing person who has grown up with deaf parents, acquiring Sign Language from an early age – often known by the acronym *"CODA"* (Child of Deaf Adults)) were compared by neuro-imaging in the same brain. Their results suggested that the age of language acquisition determines the pattern of neural processing of language in deaf children, which confirmed the critical period hypothesis and showed more specifically that there exists a linear function between the length of language deprivation and how far the pattern of neural language processes deviate (Mayberry et al., 2011). Thus, in order for a person to master the structures of a specific language fully - which also means that it will be processed in the left-hemisphere language areas, acquisition of language and brain development must take place simultaneously in harmony.

The deprivation of language does not only have a detrimental effect on the communication outcomes of a child, but can also have a negative influence on a child's social-emotional and cognitive development (Kushalnagar et al., 2011; Marschark, 1997; Marschark, 2001; Saarni, 2011). It is imperative to remember that it is not the modality of the language (i.e., signed, spoken or other), but instead the effectiveness of the proximal processes furthering communicative interaction between parent and child which plays a role in social and emotional development (Hintermair, 2006; Kushalnagar et al., 2011;

Vogel-Walcut, 2007). In respect of a deaf child, a deficiency in communication ability has been associated with an influence on personality characteristics, such as emotional immaturity (Meadow, 2005), impulsive and/or disruptive behaviour, more negative self-image, and a learned helplessness (Marschark, 1997). As noted in chapter 1, 90-95% of deaf children have hearing parents with very limited communication between them. It is therefore not language per se, but the exchange of meaningful messages in a shared mode of communication which plays the critical role in development (Hintermair, 2006; Kushalnagar et al., 2011).

Young children need to be able to use language to share and receive meaningful messages. They need to share their emotions, needs and ideas, and for the accumulating of knowledge (Marschark, 1997; Meadow, 2005). As a child get older, communication gain importance for social and emotional development. Communication is used in interaction with peers, to resolve conflict, explain problems and to learn social norms and behavioural rules from parents and teachers. This means that when a child reaches the maturation stage in which he/she enquires into more complex social and emotional issues, parents who have limited communication with their deaf child, cannot provide adequate support, leaving both parents and the child unclear as to their own and the other persons emotions, needs and wants (Kusche et al., 1983).

A variety of studies have provided evidence of the importance of communication at home for the attainment of life satisfaction by the deaf child and adolescent. In a study by Leigh et al. (2009), results showed that deaf adolescents (the majority with hearing parents) that had enjoyed satisfactory home communication, correlated well with better scholastic achievement, higher self-esteem, social competence, and overall life satisfaction.

Significant group differences were found in a comparison study between German deaf and hearing children (ages 6 – 16 years) concerning overall satisfaction of life, with the deaf children generally reporting a lower degree of fulfilment. The results were the same between youth with different levels of hearing loss. The researchers used self-rated reports, and interviews were conducted using an inventory of life quality. Although the deaf children indicated a more happiness with school and family, they had lower satisfaction levels in the general quality of life, fewer leisure interests and less personal activities than the hearing children (Fellinger et al., 2008).

In pursuance of research indicating a significant correlation between the communication of parents and their deaf adolescents and their well-being and quality of life. Kushalnagar et al., (2011) assessed the relationship between the perceived quality of life of youth in general and that of individuals with hearing loss within specific communication variables. The YQoL-DHH (Youth Quality of Life – Deaf and Hard-of-hearing) module was used, assessing the youth's perception of a full understanding of communication with parents and its importance in achieving a high participation – related quality of life. The results indicated that in cases where deaf youth perceived communication at home to be of a low order and a continuous strain, the probability of a negative influence on their quality of life and emotional well-being is high (Kushalnagar et al., 2011).

A higher quality of life, especially relating to self-acceptance/advocacy and a lower inner conflict regarding having a hearing loss were experienced by the adolescents, when they perceived their communication with their parents as being very good. These assessments were consistent, regardless of degree of hearing loss or having cochlear implants.

Significantly, consistent throughout research is the finding that in order to improve the well-being and social-emotional developmental outcomes of deaf youth, it is necessary to ensure their effective communication at home and at school from a very young age (Gascon-Ramos, 2008; Hintermair, 2006; Kushalnagar et al., 2010; Marschark, 1997).

Summary

Several important elements of developmental psychology in social-emotional competence, were discussed, which included the integrated domains of development, the variability in diverse outcomes of children, and risk factors for social-emotional delays, including being Deaf in itself.

The bio-ecological theory as the framework of this dissertation were explored. Social-emotional competence and the development thereof were described, as well as the integration with language and cognitive growth.

Literature Study

Introduction

This chapter starts with an investigation into what constitutes "achieving" deaf persons (as in the title of this dissertation) and of well-being as an improved outcome. In working towards well-being, the developmental period of adolescence was used.

Using the micro-system because of its close proximity to the interactive processes daily part of an adolescent's life, the most telling risk and influential protective factors in the lives of deaf adolescents in schools for the deaf in South Africa as well as internationally, were explored. In this case, it was found that the general unpreparedness of parents and immediate family as well as the deprivation of communication were major challenges to be overcome.

Protective factors identified in the microsystems of deaf adolescents, were the Deaf Assistant Teachers (DAT) (Smal, 2015) in schools for the deaf in South Africa and improved social-emotional competences specifically in how it can serve as essential basis in supporting the healthy development of the self, the fostering of appropriate coping mechanisms and, ultimately, the promotion of well-being.

Statistical Patterns of Social-Emotional Competence Outcomes of Deaf Children

The unfavourable circumstances discussed in Chapters 1 and 2 inevitably contribute to deaf children, -adolescents, and -adults, as a group and across cultures, to continue to suffer from deficits in several domains compared to hearing persons, such as shortcomings in cognitive processes, high levels of adjustment challenges, low academic achievements and eventual underemployment (Calderon & Greenberg, 2011; Greenberg & Kusché, 1998; Marschark, 1997).

In the social and emotional developmental domain, as

correlated with mental health problems such as psychological distress and disorders, delays in social-cognitive processes inclusive of social problem solving and maladaptive social behaviour come to the fore. More specific social and emotional skills shortcomings displayed are a general lack of motivation and initiative - crucial factors in fostering social maturity, delays in impulse control – with difficulty experienced in integrating affect, cognition, communication and behaviour, delayed empathy and moral development, role-taking inability and incapacity to accurately interpret facial expressions (Calderon & Greenberg, 2011; Greenberg & Kusché, 1998; Marschark, 1997).

However, it is important to note that not all deaf children develop problems, and once again, that it is not deafness per se giving cause to these problems, but the impact of these external factors (Calderon, 2000; Calderon & Greenberg, 2011; Marschark, 1997).

Achievement Re-framed as Well-being

Pre-Set Definitions of Achieving Deaf Individuals

In the literature, achievement of deaf individuals is described by using several different concepts such as success (Luckner & Stewart, 2003), self-actualisation (Petersen & Rems-Smario, 2014) and potential maximisation (Jacobs, 2010). In the search for studies on the achievement potential of deaf individuals specifically, two were found in which definitions were provided as to what successful deaf adults are understood to be.

The first definition was compiled by (Luckner & Muir, 2001). They read studies on successful business executives, adults with learning disabilities, and individuals with physical disabilities, to formulate their view of successful deaf individuals. Although the studies used different definitions of success, both included three elements which

(Luckner & Stewart, 2003) used to formulate their definition: these were (1) age-appropriate academic proficiency in school subjects, (2) healthy social skills (I.e. relationships with friends) and (3) positive self-perceptions (Jacobs, 2012; Luckner & Muir, 2001; Zand & Pierce, 2011).

The second definition was formulated by summarising the perceptions provided by successful deaf adults on those factors they considered had added to their success (Luckner & Stewart, 2003). The five variables identified by them, were (1) post-secondary education, (2) an annual income of more than $30,000, (3) they were employed, (4) socially satisfied – meaningful relationships, and (5) positive self-perceptions and confidence (Zand & Pierce, 2011).

Problems with Pre-set Definitions

Although pre-set definitions as those stated above endeavoured to outline more definitive margins for what 'achieving deaf individuals' were or seemed to be, a number of inherent ambiguities arose. Firstly, in considering the primary cause of a deaf child's academic performance too often snap and overly simplistic assumptions are made. Experientially, a deaf child's relative lack of academic achievement cannot be summarily attributed to being the result of the mode of communication used (e.g., Sign Language vs spoken language), but should rather be seen as a consequence of a deficit in the ability to communicate due to an insufficiency of language exposure. The linguistic deficiency of deaf children in school places them at a severe disadvantage to learn (following the same education curriculum) at an equal level (Edwards, 2007; Marschark, 1997). Many parents still today, expect their deaf or hard of hearing child to learn verbal communication and not Sign Language – thinking that the child will have acquired fluent spoken language by the time he or she enters

school. Unfortunately, most of the time the consequence thereof is it results in an overall communication inadequacy which becomes a lifelong language deficiency. Deaf children with deaf parents, still averagely do not perform on the same level as their hearing peers, although they generally fare better than deaf children with hearing parents. The linguistic deficiency and special needs-untrained educators in the education system being a major causative factor (Edwards, 2007; Marschark, 1997). Careful consideration should also be given to the influence of culture. To assume that deaf and hearing people pursue similar goals, would be failing to acknowledge that deaf people have their own socially and culturally constructed view of outcomes (Zand & Pierce, 2011). Cultures and even smaller groups within a society often differ regarding values, motives and beliefs (Marschark, 1997). Often being minorities in their own families, for deaf children it is even more complex (Zand & Pierce, 2011). Besides the influence of culture on the beliefs, motives and values attached to achievement, there also are other influences which need to be considered. In the case of deaf vis-à-vis hearing children, similarities or differences in these areas will to a large degree depend on whether a child with a hearing loss identifies more with the deaf or more with the hearing community, or both. This again might be influenced by (a) the hearing status of parents, degree of hearing loss and early relationships (Marschark, 1997), (b) how psychological needs are expressed through an interest in and intrinsic motivation for achievement (Zand & Pierce, 2011), (c) self-efficacy and perceptions of control (Zand & Pierce, 2011) and (d) the influence of culture on classroom behaviour. In addition, the educational context, where both academic and social achievement are influenced by teacher and peer attitudes, plays a key role in determining the goals of

achievement and the standards by which it is measured (Zand & Pierce, 2011; Marschark, 1997).

Jacobs (2012) puts the challenges deaf people experience in relation to achievement, into perspective: The hearing world can be a very difficult place with excessive challenges for people who do not rely on hearing. Even if a "deaf individual only manages to achieve social and professional participation and sustains a healthy mental wellbeing, he or she can be considered a remarkable example of human performance" (p.294). Great caution should thus be taken when making use of pre-set definitions.

Accordingly, in this dissertation, the intrinsic meaning of 'achievement' has been approached from a 'well-being' perspective.

Concepts of Adolescent Well-being

Well-being

Research done in South Africa in relation to adolescence and well-being, approached subjective well-being as indicated by satisfaction with life. Satisfaction with life was described in Wissing (2013, p.401) as the "*cognitive evaluation of the quality of one's life as a whole, as well as specific life domains such as school and sport, etc.*", and concomitantly by Diener et al. (2009) as "a *person is said to have high subjective well-being if she or he experiences life satisfaction and frequent joy, and only infrequently experiences unpleasant emotions such as sadness or anger. In contrast, a person is said to have low SWB if she or he is dissatisfied with life, experiences little joy and affection and frequently feels negative emotions such as anger or anxiety.*" Satisfaction with life thus do not exclude negative feeling. It is also not solely focused on current feelings experienced, but rather on a positive attitude towards one's life as a whole. Three main elements of subjective well-being have

been identified in Wissing (2013): a perceived satisfaction with life, higher levels of positive affect and low levels of negative emotions. The European Union (EU), in a multidimensional approach, and informed by the United Nations Convention on the Rights of the Child (CRC) and the United Nations Children's Fund (UNISEF) in tracking child poverty and social inclusion, also includes subjective well-being as a goal towards well-being or well-becoming of children (Dawes et al., 2007).

Universal Individual Adolescent Development

Most associated with negative feelings were a lack of autonomy and low levels of well-being, particularly in cases in which daily stresses were such that basic psychological needs could not be fulfilled. Pavot & Diener (2008) found that factors such as a disability over a long period, stressful and traumatic experiences and unemployment (Wissing, 2013), can have a lasting negative impact on subjective well-being.

Similarly, in line with the theme of this dissertation, Pavot & Diener (2008) identified the following social-emotional competencies as playing a positive role in satisfaction with life: mental health, secure attachments, rewarding social relationships and leisure activities, applicable to both adults and children. In addition are effective coping strategies that help manage daily life challenges, The motivation to achieve a satisfying future, knowing where you going in life and perceived control over life outcomes (Pavot & Diener, 2008). All these are elements closely associated with self-determinism. Self-determinism again, as the satisfaction of autonomy, relatedness and competence needs, is across diverse cultures positively correlated with life satisfaction (Church et al., 2013), which is also deaf culture and the deaf community (Zand & Pierce, 2011).

Adolescence is often described as a 3-phased (early, middle and late) transitional period from childhood to adulthood and influenced by changes in the cognitive, social-emotional and physical domains, often with social-emotional development lagging behind psychical and cognitive development (Wissing, 2013). Traditionally, adolescence is set between the chronological ages of 10 to 18, although it differentiates between individuals (Berk & Churchill, 1996).

Physical Development. Puberty determines the onset of adolescence, sometimes as early as nine years of age. Marked body changes and sexual maturation is characteristic of this period. The profound effect the changing biology can have on an adolescent's behaviour is a factor which should always be considered when working with them (Wissing, 2013).

Adolescent Emotional Development. Simultaneous with the biological changes, increasing demands such as pressure to achieve, making important life decisions, developing a healthy, realistic, and coherent sense of self, learning to cope with stressful experiences and feelings, self-regulation. satisfying relationships and becoming autonomous are placed on adolescents (Wissing, 2013). Although identity formation begins before the period of adolescence, it is only during adolescence that children begin to think abstractly and logically, giving them the capacity to figure out who they are, who they would like to become and to plan ahead (*Developing Adolescents*, 2002).

Adolescent Social Development. The context adolescents develop in, plays a critical role in their social development. This involves relationships with family, peers, teachers, and the like etc. (Bugental & Grusec, 2007). Relationships with peers become more important than those with parents as the adolescent moves towards greater autonomy although family cohesion continues to remain important (*Developing Adolescents*, 2002).

Adolescent Well-being in the Micro-System

Similar to that experienced by hearing adolescents, the micro-system, which is usually the home and school environment, including peers, is of closest proximity to deaf adolescents every-day life experiences. This interrelationship is an especially important element in the development of social-emotional competence, the self and in the well-being of an adolescent. The nature of sustained bi-directional interaction between the deaf adolescent and significant other in this context will either enhance or suppress adolescent development.

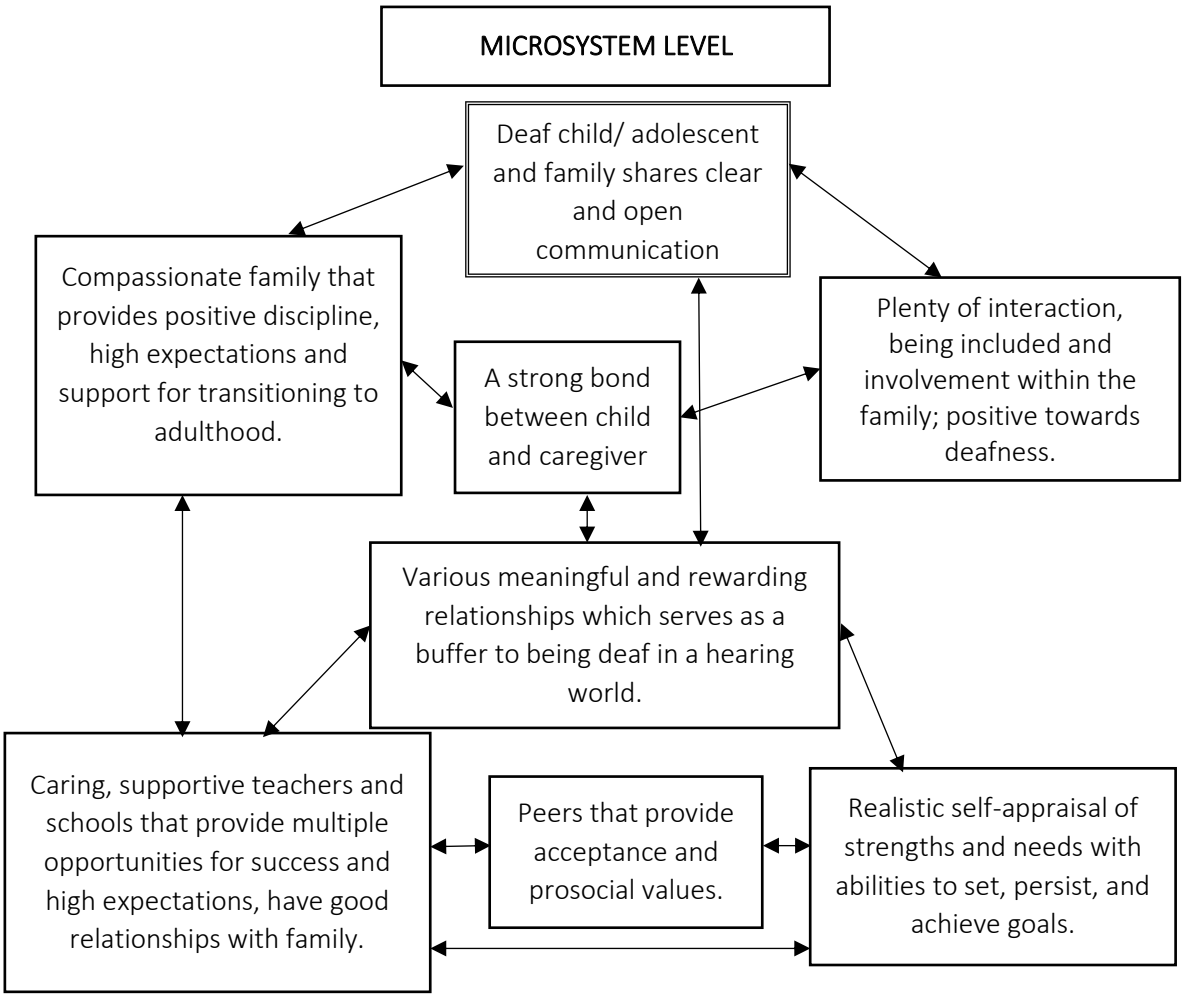
Figure 1 depicts the influences and effects of variables in the microlevel of the ecologic system relating to the fostering of well-being in deaf children and deaf adolescents. Each factor in the microsystem interacts reciprocally with others and also with those of other levels. This is true for all the factors in all the levels.

Risk and Mediating Factors

As discussed in 2.1.3, one of the main aims of developmental psychology is to determine which factors place children at risk of developing disorders (DeHart et al., 2004).

Figure 1

Important elements in the microsystem level



Note. Adapted from (Zand & Pierce, 2011, p.327)

Risk Factors

According to (Zand & Pierce, 2011), risk factors refer to the circumstances surrounding a person which potentially will lead to negative outcomes. Just being part of a particular population grouping can also present a risk. Rarely is there only one risk factor involved, usually rather a range of different risks interacting with each other. Since development does not cease with adolescence but continues well into adulthood: should risk factors not be

appropriately addressed, it will probably result in lifelong challenges (Zand & Pierce, 2011).

How the functioning of communication and family relationships as potentially risk factors can possibly affect the lives of deaf adolescents were discussed below.

Risk factor 1: Home Relationships. Consistently, research has found the home environment and communication to be of the most important elements in the lives of deaf (and hearing) children and adolescents. After all, home is where learning and socializing commence (Dawes et al., 2007; Knoors & Marschark, 2013).

Relationships and socializing processes play a fundamental role in social-emotional development and well-being. People have an innate need to feel that they are socially connected or that they belong. They want to be loved and respected for who they are and for their dreams and goals. The brain has a biological propensity for the way in which these socializing processes should occur (DeHart et al., 2004; Greenberg et al., 2014). These processes start in infancy. If an infant does not have the opportunity to connect with others and does not receive sufficient challenges, the brain would be negatively affected (*Nine Things Educators Need to Know About the Brain, by Louis Cozolino*, n.d.).

The proximal processes in close and supportive relationships stimulate positive emotions and learning, and fewer family disruptions contribute to resilience (Harney, 2007). If taken into account that adulthood, the socialization patterns in the caregiving environment will either promote or negatively influence trust, independence, motivation and relationships with others (Elias et al., 1997). It is the day to day constructive interactions directly or incidentally between caregivers and deaf adolescents that infuse their social norms, values and practices, and that equips them with the same skills

and to the same extent as their siblings (Zand & Pierce, 2011). The overall successful outcome of adolescence is the achievement of general adaptation, personal autonomy and successful transition to adulthood.

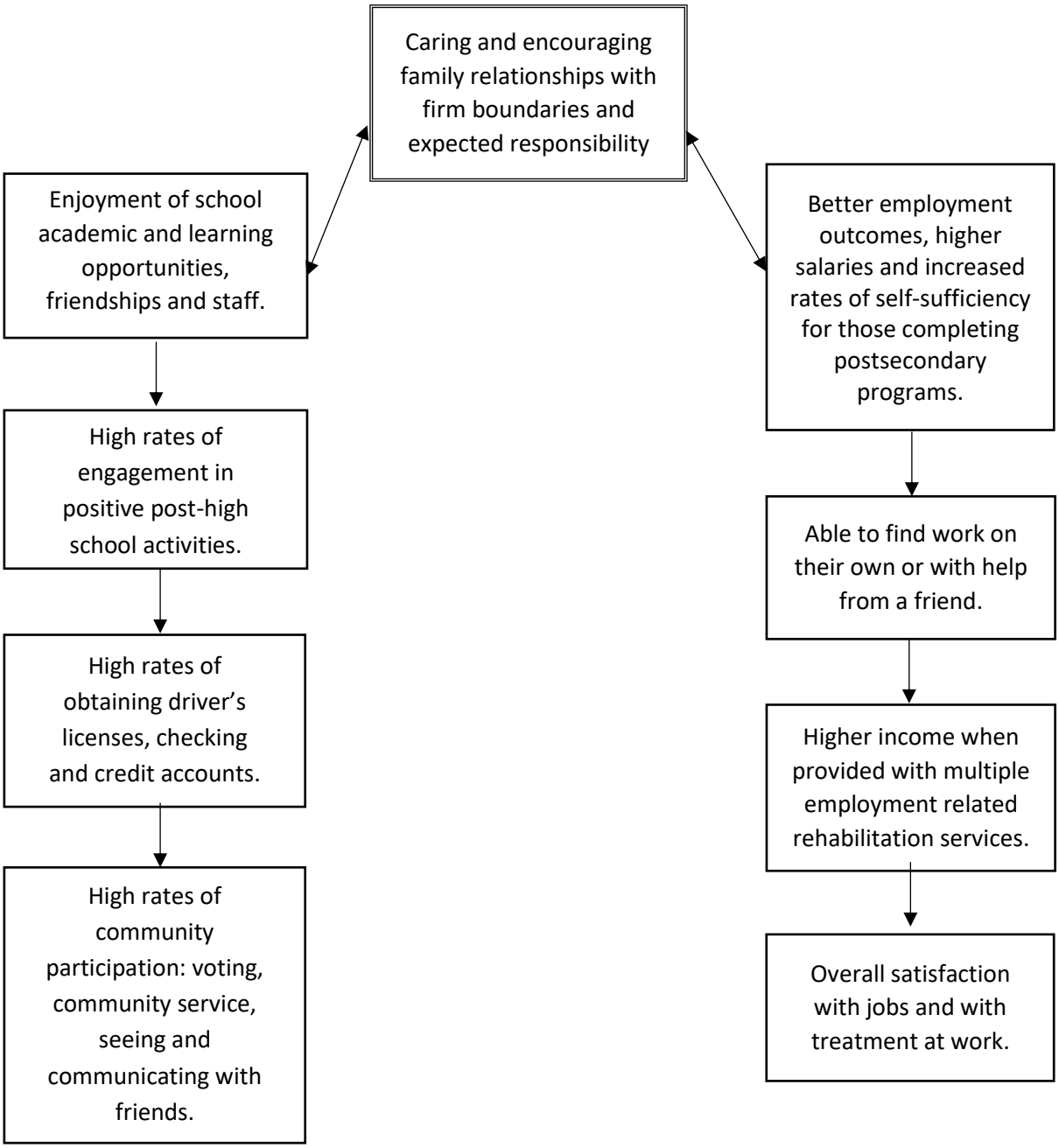
However, without a shared language and fluent communication this becomes almost impossible, leaving deaf adolescents without an understanding of the traditions and values of their family and community, to the same extent as everyone else (Zand & Pierce, 2011). In most cases, the deaf adolescent has been and still is the only deaf person in his/her family environment and is likely to be the only one to become part of the deaf minority culture (Gascon-Ramos, 2008; Marschark, 1997). Many parents, unfortunately, "choose to deny deafness and ignore the community", instead of discovering the world of their deaf child or adolescents (Gascon-Ramos, 2008). In South Africa, this is also no exception (Swanepoel, 2012), for example, from his time spent at a school for the deaf in South Africa, found that parents from lower socioeconomic and educationally disadvantaged communities, often tend to enrol their deaf children in schools for learners with intellectual disabilities at which South African Sign Language (SASL) is not taught, to remain there for their whole school career.

Acceptance and adaptation of parents to deafness is one of four main factors of warm and healthy caregiver-child relationships predicting school achievement. The other three factors are

- family participation and inclusion,
- giving direction and teaching them skills and
- having high expectations throughout the child/adolescent's school years (Bodner-Johnson, 1986; Zand & Pierce, 2011).

Figure 2

Family elements contributing to positive outcomes



Note. Adapted from (Zand & Pierce, 2011, p.313)

Risk factor 2: Communication Deprivation

> "Parent-child communication is easily the best predictor of success in virtually all areas of deaf (and hearing children's development" (Knoors & Marschark, 2013).

Significantly, consistent throughout research is the finding that to improve the quality of life and social and emotional developmental outcomes of deaf youth, it is necessary to ensure their effective communication at home and in school from a very young age (Gascon-Ramos, 2008; Hintermair, 2006; Kushalnagar et al., 2010). Hearing children and adolescents learn skills – often incidentally, from a wide array of people: at home and via the extended family, and from teachers, peers and other influential adults. For deaf adolescents, however, to acquire the social-emotional skills needed to be able to manage their lives and worlds effectively – both in adolescence and into adulthood, apposite communication is crucial.

As the deaf child gets older, communication becomes even more important with regard to social and emotional development – communication is used in interaction with peers, to resolve conflict, to explain problems and to learn social norms and behavioural rules from parents, teachers and the like. Lacking in communication would mean that when a deaf child reaches the maturation stage in which he/she enquires into more complex social and emotional issues, parents who have limited communication with their deaf child are unable to provide adequate support, leaving both parents and the child unclear as to their own and the other persons' emotions, needs and wants (Vaccari & Marschark, 1997).

Various studies have provided evidence on the importance of fitting communication at home to ensure the attainment of life satisfaction by the deaf child and adolescent. Leigh et al. (2009) as

cited in Hintermair (2008), did an analysis of deaf adolescents (with and without cochlear implants (CI)) psychosocial functioning and found that satisfactory communication at home contributed to higher acculturation to and with the hearing world, and in bolstering self-esteem, social competence, scholastic achievement and overall life satisfaction.

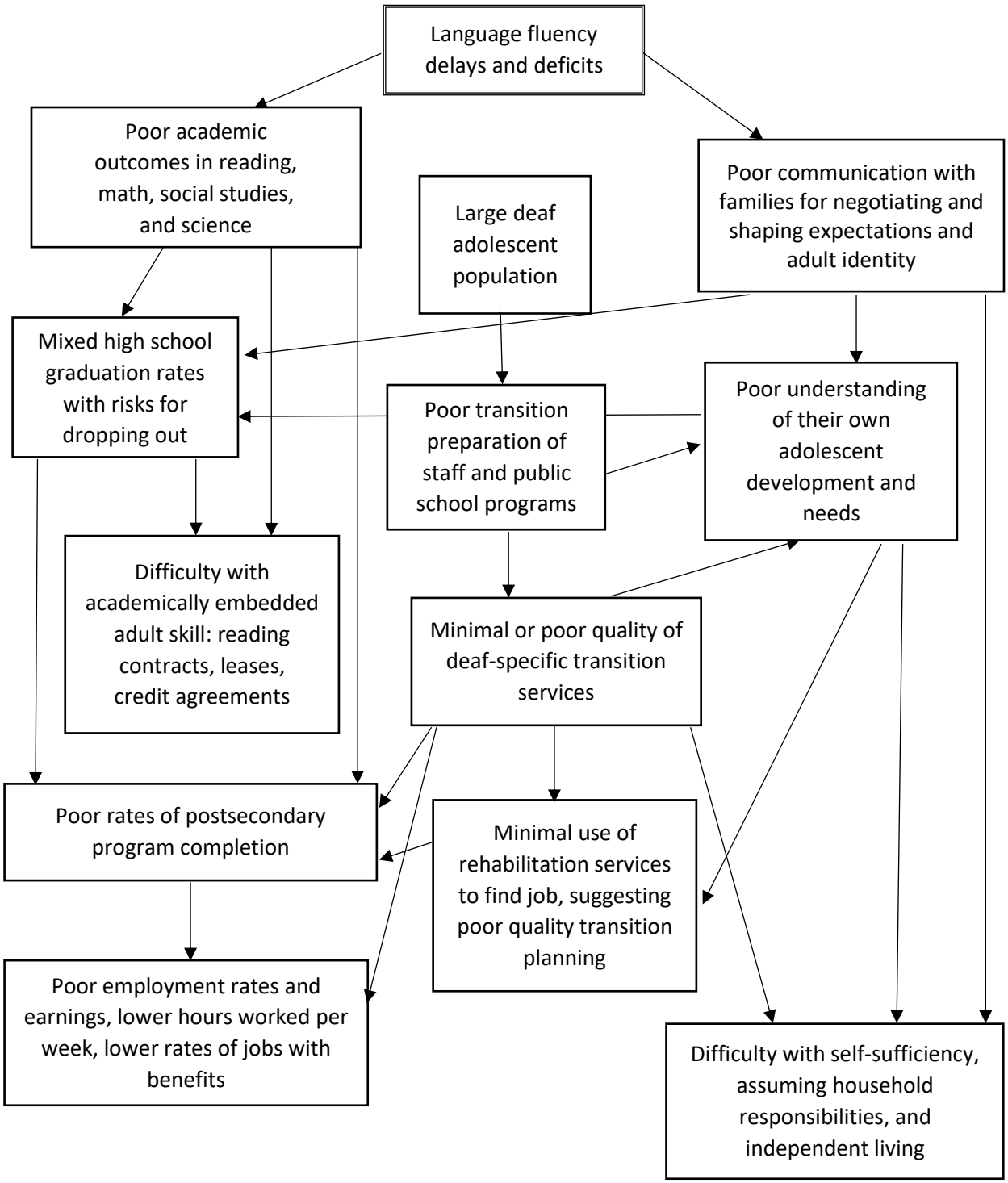
Employing the Youth Quality of Life – Deaf and HOH) (YQoL-DHH) measure, the Children's Depression Inventory — Short Form (CDI-S; Kovacs, 1992), and the Colorado Individual Performance Profile: Classroom Participation Questionnaire, Kushalnagar et al. (2011) was interested in the relationship between the modes of communication they preferred as well as their perceptions of how well they understood their parents' communication, with their perceived generic quality of life and DHH-specific quality of life. The generic quality of life test included the self, environment, relationship, and generic domains, while the deaf and hard of hearing quality of life test contained participation, acceptance/advocacy, and perceived stigma domains. The different modes of communication were Sign Language, speech, and both sign and speech. The perceived youth level of understanding domains was all of what the parents say, most of what they say, and some to none of what they say. The results demonstrated that the adolescents who perceived that they understood all or most of what their parents communicated to them, reported significantly higher quality of life for both the generic and deaf-specific questionnaires. Where the deaf adolescents had a perception of home communication to be of a low order and a continuous strain, the probability of a negative influence on their quality of life and subjective well-being was high. These assessments were consistent amongst all deaf youth tested, irrespective of their degree of hearing loss or whether they had had cochlear implants.

Unfortunately, "deaf adolescents often experience major barriers to communication, particularly in respect of dialectical communication (relating to the logical discussion of ideas and opinions)" (Zand & Pierce, 2011, p.255). Research by Swanepoel (2012) has revealed that in South Africa, communication at home – between deaf children and their hearing parents child - mainly consist of gestures based on the dialect of the parents (ranging across the broad spectrum of the eleven which is official languages).

The basic needs of communication and a perception of their deaf culture are rarely naturally met for deaf adolescents. Many adolescents can't communicate their needs and desires, they don't relate to or understand their parents' or surrounding society's expectations, resulting in overwhelming frustration and an inadequate sense of belonging (Zand & Pierce, 2011). A sense of belonging provides feelings of acceptance, rewarding social relationships, plays an important part in finding life worth living and coping with painful emotions and circumstances. An inadequate sense of belonging frequently results in negative outcomes, alienating experiences in home and school environments and even personal dissociation (Zand & Pierce, 2011). This can have significant effects such as psychological disorders, weak academic performance, a negative influence on the self-esteem, autonomy, competence and relationships with others, as well as difficulties in trusting others and in social skills (Zand & Pierce, 2011). The higher rates of behaviour problems detected in deaf children and adolescents may also be explained by these circumstances (Swanepoel, 2012).

Figure 3

Language contributing to positive or negative outcomes



Note. Adapted from (Zand & Pierce, 2011, p.312)

Mediating Factors

Mediating or protective factors are external and internal factors or the interaction of the two, serving as safeguards against potentially negative outcomes due to the exposure to risks. When the mediating factors allow the deaf individual to develop resilience, thereby allowing the deaf individual to successfully cope with the adverse circumstances and increase the likelihood of well-being, it predicts positive outcomes (Zand & Pierce, 2011). In Compas (2004) as cited in Zand & Pierce (2011, p.253) coping is explained as "*processes* of adaptation, competence as the *characteristics and resources* that are needed for successful adaptation and resilience is reflected in *outcomes* for which competence and coping have been effectively put into action in response to stress and adversity." It is generally agreed that coping relates to "attempts (or strategies such as social-emotional skills) on the part of the individual to lessen the physical and psychological pain that are associated with negative life events and ongoing stressors" Jambor & Elliott (2005; p.64).

As much as the absence of reciprocal interactions between the deaf child and caregivers in the home environment create a risk, so can healthy interactions, becoming progressively more complex, be mediating factors in the life of a deaf child and adolescent. In the section following, two mediating factors are discussed: social-emotional competence and educational support in the form of Deaf Teaching Assistants (DTA's).

Mediating Factor 1: Social-Emotional Competence. A focus on the ability of deaf to withstand and manage their daily stresses, is where we should begin (Masten, 2001). The question which is addressed in this section is how can social-emotional skills support and empower deaf adolescents to develop the capacity to withstand the challenges they have to endure,

stand up to and resist the negative ideas about what they are capable of and predict their well-being?

Gascon-Ramos (2008; p.58) stated that "the well-being is often seen as the result of positive mental health experiences" and "the key to the wellbeing of children is probably their social and emotional development." Social-emotional competencies is thus seen as protective resources which steer children and adolescents away from mental health problems and serve as supporting resources when challenged by negative circumstances (Bronfenbrenner & Morris, 2006; Gascon-Ramos, 2008; Masten, 2016). The deaf adolescent, comprising of such social-emotional competencies, will be able to continue working towards reaching success (however he or she defines it) in spite of facing significant risks, he/she will have

- a sense of purpose in life,
- a sense of directing your own life, have
- meaningful social relationships and
- express more positive emotions and a belonging.

Research has also confirmed that students can be taught successfully social and emotional skills. The skills and behaviours of self-awareness, self-esteem, self-determination, hope, locus of control, maturity, mindfulness and problem-solving, the development of coping skills and competence, strong communication skills and academic achievement, together with a healthy identity, is foundational for deaf youth in developing resilience (Zand & Pierce, 2011).

In adolescence, emotionality and emotional awareness increase considerably (Louw & Louw, 2007). Using brain imaging and animal studies, (Casey et al., 2008) provided a credible biological model of the neural mechanisms underlying "nonlinear changes in behaviour" in respect of the way adolescents experience emotions. Adolescents are typically more emotional and more sensitive to stress, with stronger

reactions to incentives and social relationships impulse control is still developing. Adolescents, because of their vulnerability, often behave according to the emotions they feel, more so when they experience mostly negative feelings, which constitute a major risk. They tend to make choices according to the emotions they are experiencing, leading to negative consequences such as leaving school early, pregnancy, sexually transmitted diseases, violence and substance abuse (Casey et al., 2008).

Self-awareness. Developing an awareness of own emotions, being able to recognize, identify and name feelings and understanding why specific feelings and accompanying behaviour is experienced, is called self-awareness. It is a critical step in development, often one of the first social-emotional skills addressed in social-emotional programmes (Elias et al., 1997; Kusche et al., 1983).

Self-awareness is also a necessary step in increasing self-knowledge and recognising individual motivation, also what is experienced as stressful, strength and weaknesses, and how to work on these areas to improve one's coping skills. When adolescents lack in self-awareness, they tend to be more susceptible to feelings of stress, are easily overwhelmed, and have a hard time dealing with conflicts, heightening fearfulness and insecurity. They become oversensitive and feel controlled by external circumstances, thereby intensifying feelings of helplessness.

Supporting adolescents to become more aware of who they are can help build their self-confidence, assertiveness, how to deal with conflict constructively and it increases self-control exponentially (Elias et al., 1997).

Self-regulation. Self-control is the social-emotional skill of managing emotions, also called self-regulation, an important personal strength. A crucial process of the bio-ecological theory and the PPCT model,

supported by cognitive development, is the deaf adolescent's increasing competence in being able to manage aggression - constituting a positive change over time (Bronfenbrenner & Morris, 2006). This competency supports adolescents in anticipating own emotional reactions in stressful circumstances in such a manner that it evens out everyday stressors and difficulties, thereby increasing effective management of emotionally charged situations and, importantly, the emotions of others (Tudge et al., 2016). The adolescent is being prepared for adult life, and the tools for his/her emotional management learnt from parents and/or teachers will be carried forward into meaningful relationships later in life.

Many choices adolescents make, will have an influence on their life as adults. According to Elias et al. (1997), when an adolescent know himself better (self-awareness) and have higher levels of self-regulation, it provides him with a comparative advantage to healthier decisions, in adjusting positively and when looking for a job (Elias et al., 1997). In contrast, adolescents with poor emotional regulation have trouble in accessing information, struggle in stressful situations and are more likely to behave reactive.

Social awareness. As adolescents become more skilled in self-awareness and self-regulation, they develop a greater social awareness - are able to more accurately understand other people's thoughts and feelings, recognizing and accepting that another person's perspective, preference or viewpoint might differ from one's own. This is called theory of mind, the beginning of developing empathy for others and becoming socially aware. Empathetic people are usually excellent at managing social relationships and are slow in judging too quickly (Elias et al., 1997). Nonverbally deaf and hearing children are equally intelligent with similar cognitive potential. However, in deaf children and

adolescents extensive delays are experienced in theory and mind (Gascon-Ramos, 2008; Marschark, 1997; Zand & Pierce, 2011).

Identity. To form an identity is one most important developmental tasks during adolescence. Due to cognitive advances, adolescence develop the capacity to reason abstract, to plan future options, and to reflect on various possibilities and identities at once, which can include an increased awareness of their ethnic identity (Zand & Pierce, 2011). The construction of an identity develops through different experiences, relationships and making sense of the world. The relationships deaf adolescents are involved in, will impact their beliefs and views about their perceived world and keep on influencing them as they continuously refine their sense of self (Zand & Pierce, 2011).

In the literature, identity development is approached from three general themes which are self-concept, sense of identity, and self-esteem (Edwards, 2007). Self-concept is the pictures a person has of himself/herself and the attributes that such a person thinks he/she has (Gascon-Ramos, 2008). The self-concept is related to various aspects of development which influence each other in a complex bi-directional relationship. For example, language proficiency supports the development of self-control/ regulation and executive functioning which again has a strong influence on how well the adolescent will adjust to the social world and on the coping skills to withstand social obstacles (Zand & Pierce, 2011). Where self-concept is conflicted, identity represents a coherent sense of self stable across circumstance inclusive past experiences and future goals. Erikson found that "identity achievement" resolves the identity crisis often occurring when adolescents must explore diverse possibilities and integrate different aspects of themselves before committing to a selected identity (Zand & Pierce, 2011). Deaf identity relates to an individuals' perception of himself/herself as a member of a community,

sharing a language, etc. Deaf cultural identity, however, is defining of deaf persons belonging to a distinct group, separate from their hearing counterparts (Edwards, 2007). Before deaf adolescents focus in on a personal identity, they begin by defining themselves as being part of the culturally deaf group, which serves as a psychological protective "barricade" against challenges (Zand & Pierce, 2011). However, although being deaf will always be an inherent element of a deaf person's identity, he/she should not be defined by this alone. A deaf adolescent can also have a whole range of identities - such as relating to the deaf group as well as the hearing group they belong to, ethnicity, social status and more (Mcilroy, 2008). Development of social-emotional competence - inclusive of getting to know oneself and forming a sense of self which is clear and coherent, self-efficacy and self-confidence leading to self-esteem and self-mastery, plays a particularly important role. To illustrate, a positive association has been found between high school student's experiencing life satisfaction and in having well-developed self-concepts (McCullough & Heubner, 2003) typified in a belief in their own competence to set and attain goals (Wissing, 2013).

Together with a perspective that they have the ability to manage environmental demands effectively, this demonstrates a sense of mastery which, according to (Thorne & Kohut, 2007) is an important individual determinant of effective coping responses that influence well-being. When a healthy self-concept converge with the ideal self, it is indicative of an adolescents mental health and subjective quality of life or well-being (Jambor & Elliott, 2005) and will have a powerful impact on his/her cognition, motivation, emotions, and behaviour (Edwards, 2007). Once again, self-esteem develops from within the adolescent's relationships. Having other people believing in them is thus key to the development of self-esteem (Convertino et al., 2014;

Jambor & Elliott, 2005). Deaf children raised in deaf environments learn about their differences to hearing people as "one more fact of life" while deaf children raised in hearing families "might go through a painful process of denial, misattribution, loneliness and sadness" (Gascon-Ramos, 2008). In addition, "if Deaf persons were to believe that they are disabled, it is because they experience contempt and shame before others (hearing) in the public space especially at school, and therefore their dignity is compromised" (Taylor, 1992, as cited in McIlroy & Storbeck, 2011, p.497).

The relation between development of culturally Deaf and bi-cultural identities and positive adult self-esteem (Bat-Chava, 2000; Jambor & Elliott, 2005) correlate closely with a Deaf child's school environment. Identifying with the various groupings, rather than opting for audiological association alone, seems to be crucial to deaf children's emotive wellbeing (Gascon-Ramos, 2008; Zand & Pierce, 2011). Identifying with the deaf population, using Sign Language, and engaging with the Deaf community – instead of merely having a hearing loss, is what Gascon-Ramos (2008; p.63) describes as "living a Deaf oriented life." This is what nurtures self-esteem and is shielded against stigmatisation. However, when young deaf people do not have adequate opportunities to do so and are commonly associated with and identified by the audiological label of being deaf - rather than being viewed as having a cultural connection, the chances are higher to submissively accept the stigmatisation (Bat-Chava, 2000). This suggests, that supporting the importance of psychosocial as well as ecological variables when attempting to understand a deaf child's social and emotional development process, will enhance self-esteem (Wissing, 2013).

Mediating Factor 2: Deaf Teaching Assistants at South African Schools for the Deaf

> Students who are loved at home, come to school to learn, and students who aren't, come to school to be loved (Allum, 2019).

The extent to which deaf children use opportunities in their environments, is called "their life-ability", an integral element in Veenhoven (2012) model of well-being (Gascon-Ramos, 2008, p.64). How to ensure that deaf adolescents are exposed to positive influences that can cultivate their social-emotional competencies, is discussed. What situations, influences and support are conducive to cultivating self-protective competencies?

A positive approach and beneficial management of a school can have a powerful impact on a deaf child's ability to deal with challenges and to develop a sense of self, and on his/her productive transition to adolescence and young adulthood. Effective schools with positive school experiences and communication methods accessible to the child, stood out amongst other elements in the microsystem, as serving a protective role to deaf children and adolescents (Knoors & Marschark, 2013). Also, communication methods that are natural to the child will promote opportunities directly impacting on the degree to which school experience is understood by the child and, therefore, creating opportunities for academic success and enhanced self-esteem (Gascon-Ramos, 2008).

However, South African Schools for the Deaf critically need system and social structural changes to foster and create greater opportunities to promote social and emotional competence and well-being of deaf learners. In addition to South African students at schools for the Deaf performing weak mathematics and reading (measured using internationally standardized evaluations such as TIMSS and PIRLS) and graduate with low academic quality, teachers are underqualified, they have low morale and are constantly absent (Smal, 2015).

Although this study focuses mainly on the microsystem, the negative influence of pervasive societal influences on deaf adolescents is too significant not to mention. Societal factors, specifically in South Africa, such as discrimination and poverty affect the well-being of adolescents significantly (Wissing, 2013). A great many, if not most, of deaf adolescents in Schools for the Deaf in South Africa, emanate from low socioeconomic circumstances (such as, poverty and unemployment), which have the adverse effect of excluding deaf adolescents from important resources, creating a sense of helplessness and unavoidable acceptance of the status quo impeding their aspirations, motivation and ability to manage and overcome adverse circumstances (Wissing, 2013). Deaf children's emotional growth and socialization patterns are seriously put at risk by limited access to their social worlds. For deaf adolescents to achieve full potential, "highly advanced input from the social environment is required" (Zand & Pierce, 2011). Unfortunately, this is almost impossible with only 6% of hearing people in South Africa who have knowledge of Sign Language, and that includes teachers of the deaf (Smal, 2015). To complicate matters more, the South African education system (both National and Provincial) has severe inadequacies and limitations. Teachers at schools for the Deaf do not need any applicable qualifications or formal training in the "Ortho didactics" and evidence-based methods for teaching deaf learners, a knowledge of Sign Language is not deemed necessary (of the 99 teachers at schools for the deaf in South Africa, only 92 have any formal qualifications in South African Sign Language) (Smal, 2015). Besides this being a serious infringement of their constitutional human right to communication and education in their own language of choice without discrimination, it inevitably also gives rise to the atrociously poor scholastic results of Deaf learners, their

high school drop-out rates, bleak futures and eventual social isolation (Smal, 2015).

The only short-term solution currently is the appointment of Deaf Teaching assistants. Schools should play a fundamental role in the lives of deaf children in South Africa, where Deaf Teaching Assistants (DTA) can enhance the ways social support can facilitate well-being and resilience, thereby strengthening deaf adolescents' capacities for relatedness, competence, and self-determination. When relationships with parents are disrupted or negative, the social support they receive at school becomes even more important. They need a relationship with another adult who understands them and are willing to support them and "promote social cohesion", such as the DTA, based on positive attachment (Wissing, 2013). When children experience a sense of belonging, it motivates them to develop their skills and contribute to social cohesion which benefit all (Elias et al., 1997). When a student's attachment to school are strengthened, their interest in learning will also flourish (Elias et al., 1997).

Learning drives development. Learning essentially refers to the changes in an individual' s knowledge as a result of experiences. Learning thus is an "ecological process shaped by aspects of the learning situation and by characteristics of the learner" (Knoors & Marschark, 2013, p.17).

Although the increased independence of adolescents requires a greater reliance on their own intra- and interpersonal strengths, many authors emphasize the link between strong supportive relationships and self-efficacy, competence, and self-regulation (Becker & Luthar, 2002; Rutter, 1989). The DTA, also acting as a role model, will be able to support adolescents in their pursuit of identity formation. High levels of social support, and the perception thereof, is a coping resource which adolescents can use when dealing with stressors (Zand &

Pierce, 2011). Social-emotional learning programmes can be used to encourage dealing with stressful situations, in an effort to reduce the negative effect (Elias, 2003). The perception that others are supportive (i.e., parental involvement, encouragement, and appreciation) enhances a positive self-concept which includes personal competence in social-emotional factors such as a healthy self-esteem (Roeser et al., 1998).

When teachers teach students social-emotional skills and competencies, students must be actively engaged in the process, making fluent communication of the utmost importance. This creates a classroom atmosphere where caring, trust and commitment to learning can thrive (Elias, 2003; Kellough & Kellough, 2008). These emotional gains are evident in an adolescent's mastery of a stressful situation and emotional control.

Although DTA's have been employed at an incremental rate since 2015, not nearly enough. In 2015, there were 38 Schools for the Deaf in South Africa, where 34 combine primary and secondary sections; inclusive of the following phases: Foundation Phase (Grades R-3), Intermediate Phase (Grades 4-6), Senior Phase (Grades 7-9) and FET Band (Grades 10-12). Three of the 38 schools are registered as secondary schools with a Senior Phase (Grades 8-9) and an FET Band (Grades 10-12) (Smal, 2015).

However, to do justice to the implementation of SA Sign Language as Home Language there should at least be one Deaf Teaching Assistant appointed for each grade which still leaves subject matter inaccessible to the learners. Also, the number of Deaf Teaching Assistants (DTA's) needed are higher than the numbers already appointed because of a "lack of funds" by the Provincial Education Departments. (Smal, 2015).

Summary

This chapter started with an investigation into what constitutes "achieving" deaf persons (as in the title of this dissertation) and of well-being as an improved outcome. Adolescents in the schools for the Deaf in South Africa were the developmental period used and the risk and influential protective factors in their lives as well as internationally, were explored. In this case, it was found that the general unpreparedness of parents and immediate family as well as the deprivation of communication were major challenges to be overcome. Protective factors identified in the microsystems of deaf adolescents, were the Deaf Teaching Assistants (DTA) (Smal, 2015) in schools for the deaf in South Africa and improved social-emotional competences specifically in how it can serve as essential basis in supporting the healthy development of the self, the fostering of appropriate coping mechanisms and, ultimately, the promotion of well-being.

Research Design

Introduction

At the beginning of this dissertation, three sources were utilized: personal experience, a research study done by the author in 2012/13 and the literature study for the current dissertation, which was described. Further, the general limitations of deaf related studies were laid out, as well as the research design.

Previous Experience and Knowledge

Personal Experience

The author has a son who was born deaf. Before school he attended the Carl du Toit school where she was taught how to teach him to speech read. Due to the fact that he has a major hearing loss as well as adhd, he was placed at a school for the deaf. After experiencing the south African schools for the deaf system for eight years, attending a conference for the education of the deaf in Sydney, Australia and visiting a school for the deaf in Indianapolis, he was home-schooled by a remedial teacher until finishing grade 12.

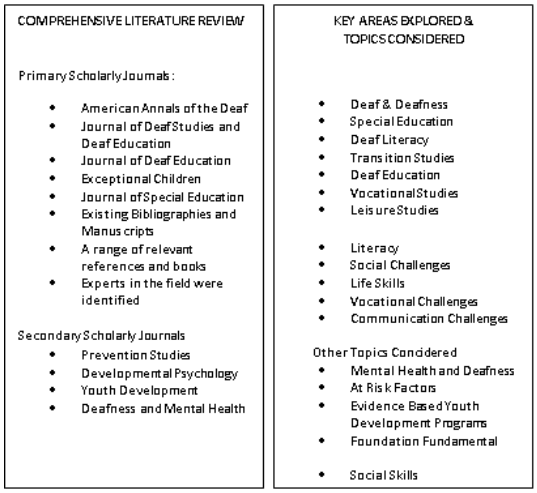
Previous Research

The research study done in 2012 and 2013 was done for the National Institute for the Deaf (NID) and was done in 6 phases.

Phase 1 was desktop study done into national and international research findings relating to the factors which serves as barriers and the elements supporting Deaf basic education, further education and training and/or sustainable employment. The following table shows the key areas explored and the topics considered.

Table 2

Literature Topics of Previous Research



Phase 2 comprised of **school visits** in different provinces entailing the exploration into the barriers deaf adolescents and young adults experience causing them to be ill-prepared for post-school occupational skills training. Semi-structured interviews were conducted with school principals, educators, speech-therapists, social workers, and learners. Group discussions were held with members of provincial special education, educators, school Principals and parents. A questionnaire served as a topic guide. Phase 3 drew on the views of various experienced NID personnel.

Phase 4 employed a custom-designed questionnaire to reflect the views of 17 second year post-school NID College students.

Phase 5 comprised an exploration into - barriers/stumbling blocks hindering training of Deaf students at the NID College and/or impeding their successful completion of training, factors that could improve the outcomes of the training, those elements identified as contributing to the successes of the students - and employed at the NID College and those factors contributing to attainment/retention of eventual employment. This investigation employed a custom-designed questionnaire to reflect the views of the 17 first- year (Links4Life) NID students.

Phase 6 was aimed at gaining a deeper understanding of the employment sphere of Deaf young adults. Semi-structured interviews relating to both challenges and success factors experienced, were

conducted with placement officers and at a number of organization's employing Deaf persons.

Literature Study for the Current Dissertation

Through the previous discussed projects in 4.1, a comprehensive personal library of relevant references was built: also, international, and national experts, research facilities and institutions in Deafness relevant issues were identified. On the current subject (social-emotional development and well-being of deaf adolescents) however, a lot less was available and therefore the personal library and the bibliographies of experts on the current subject served as the initial basis of this study.

From this the following assumptions and motivation for the dissertation study were made:

Assumptions and Motivation

- In South Africa there is a shortage of mental health services for deaf persons, in schools and in general. Because of the experiences of my son (being born deaf as well as having ADHD), the experiences of his friends and families, and having a deaf aunt, and how they struggle to get the mental help they need, and after many, many research, I came to believe that teaching social-emotional skills in schools for the deaf, could empowered them to develop resilience and coping skills and ultimately well-being.
- For this to be achievable, the positive correlation between social-emotional competence and well-being (subjective quality of life) will need to be explored.
- Because of the fact that most parents and families of deaf children are hearing, they are generally unprepared to communicate and educate their deaf child. There is not at all adequate support

for parents, emotionally, and in assisting them to make the best choices and give their deaf child the best possibility of reaching their potential.

- This continued at schools for the deaf in south Africa where teachers are inadequate or just not interested in giving deaf children the education they need.
- Because of these circumstances, many deaf children leave school early, and even if they finish grade 12, they are generally unprepared for employment.

General Deaf Research Limitations

Even in developed countries in ideal circumstances, researching deaf related issues presents itself with many complexing difficulties. But, when faced with additional complications, such as conducting deaf research in developing countries (with their own set of additional challenges) and/or faced with the Covid-19 pandemic, researching deaf individuals becomes ever more challenging. Therefore, the limitations experienced in general deaf related issues and more specifically this study, will be discussed first.

Limited Statistics

Although the quantity per units of child hearing loss in developing countries such as South Africa are much higher than in developed countries, it remains a low incidence condition with lower priority, which adds to the difficulty obtaining accurate numbers in South Africa and any particular country *(" In South Africa approximately 10% of the population has a significant hearing loss , but only about 2% seek treatment")* (Lotter, 2020). In South Africa there is limited population-based studies and hearing loss data available (" there are great variations and inconsistencies of

available findings conducted in sub-Saharan Africa") (Desalew et al., 2020; Mulwafu et al., 2016).

Since I have commenced with research for the National Institute for the Deaf in 2012, the Department of Women, Youth and Persons with Disabilities has been unable to furnish any statistics in respect of the deaf population or schools for the deaf in South Africa. Those statistics available differ from province to province. At some of the schools visited, the school was unable to provide any relevant statistics (such as the number of learners and qualifications of the teachers).

Heterogeneity

Level of Education. According to research undertaken by Antoinette Oosthuizen ("SA Is Failing Deaf and Hard-of-Hearing Learners: Can a Bilingual Model of Education Be the Solution to Acquiring Literacy?," 2018), South Africa is failing deaf and hard-of-hearing learners, learners with hearing loss comprising Five Percent (5%) of the number of learners nationally, but a significantly number of learners drop out of school in later grades. This results in those schools with a Grade 12, being inundated with learners from a host of different primary schools. At one such school providing Grade 12 for deaf and blind learners, the Grade 8 class consists of learners from 11 different primary schools across different provinces (which all has different education standards). In an interview with the relevant Grade 8 teacher, she stated that as a result of such learners being on different levels to educate all the children in her class equally, she was compelled to adopt the level of the slowest (ill-prepared) learner, often resulting in being unable to work through the curriculum for the year.

Age of Identification. The degree of hearing loss in most children falls within the mild to moderate range, as opposed to severe or profound (Moeller, 2000). Although children with a mild hearing loss can hear and speak spoken language to a certain extent, they require hearing aids. Any hearing loss in excess of 20dB is considered significant for spoken language acquisition and education. Children with a severe to profound hearing loss, typically need amplification such as hearing aids to process spoken language signals (Marschark & Spencer, 2003). According to Storbeck cited in "SA Is Failing Deaf and Hard-of-Hearing Learners: Can a Bilingual Model of Education Be the Solution to Acquiring Literacy?," (2018) "children who are deaf and hard of hearing follow roughly the same steps as hearing children, but late identification of hearing loss limits the South African Deaf education system, and together with other environmental challenges prevent many deaf and hard-of-hearing children from reaching their full potential."

Additional Disabilities

Based on available literature, Moores (1996) estimated that deaf children have as much as 30-40 percent additional disabilities, adding to their difficulties. Amongst children with cochlear implants, it was found to be approximately 39-54 percent. These additional disabilities range from cognitive, visual, learning problems to physical, and more. To add to the complexity of providing adequate support, the effects of multiple difficulties are multiplicative, and not simply additive (Knoors & Vervloed, 2011).

Research Methodologies

Because children with a hearing loss is in the minority, it limits the possibility of adhering to the requirements of the recommended standard of research, namely randomized controlled trials (Edwards, 2007; Marschark & Spencer, 2009). Further, those studies that are

available rarely use the same cut-offs, making comparison difficult (Mulwafu et al., 2016).

Defining the dimensions of a study of deaf persons is a definite challenge. When matching deaf and hearing children, is chronological age a factor or are grade level, IQ or lack of additional problems, degree of hearing loss or language ability, parent involvement or age of starting school factors? Is there, or should there be, a difference in the education of deaf children of deaf parents, deaf children of hearing parents, or in some instances hearing children of deaf parents (CODAS) (Marschark & Clark, 1993).

How are nonverbal tests applied or simplified materials employed to prevent bias, or questionnaires designed specifically for deaf individuals, or tests used for hearing persons but using an interpreter, or tests selected for their reading level (which differs from country to country and also from school to school? (Marschark, 1997).

Research Design

Sampling Procedures and Characteristics

Adolescents with hearing loss were drawn from 1 South African school for hard-of-hearing in Gauteng and 1 South African school for the deaf in KwaZulu-Natal.

Change over time is one of the dimensions of the bioecological and PPCT model (Bronfenbrenner & Morris, 2006). Due to time constraints which did not allow longitudinal research, data were collected from three age groups of adolescents; learners from grades 7, 9 and 12 from each participating school were evaluated. Only learners with hearing losses were included in the study.

Of the 38 Schools for the Deaf in South Africa (as in 2015)

there are more or less ten with grade 12 and only three of these are registered as secondary schools with a Senior Phase (Grades 8-9) and a FET Band (Grades 10-12) (Smal, 2015). General limitations discussed in 4.3 such as environmental complexities of a developing country (e.g., on a micro level - the illiteracy of the parents, and on a macro level - the lack of cooperation and knowledge of the authorities and schools), limited statistics, heterogeneity (e.g., age of identification, level of hearing loss and whether they are equipped with hearing aids, exert an influence on the deaf or hard-of-hearing individual's levels of education, literacy, ability to read and their capacity to understand abstract ideas and information (De Wet, 2008) and the additional circumstance of the Covid-19 pandemic (making it impossible to reach deaf adolescents), contributed to the difficulties experienced acquiring a representative sample.

These limitational factors complicate a deaf adolescents proficiency to communicate with hearing persons and to complete written questionnaires (De Wet, 2008). At a recent HRSC seminar, Dr Storbeck asks the question: "If we have 12 years of schooling for deaf children and they are still not learning the basics, we need to ask ourselves if it is ethical" ("SA Is Failing Deaf and Hard-of-Hearing Learners: Can a Bilingual Model of Education Be the Solution to Acquiring Literacy?," 2018). According to Dr C. Storbeck (Associate Professor at the Centre for Deaf Studies, University of the Witwatersrand, Johannesburg) utilising the self-administering written questionnaires, strongly reduce drawing the sample from the applied population and would include only adolescents with a hearing loss adolescents who have attained the proficiency to read and write, or those in schools where there are an interpreter or a reliable teacher who could communicate in Sign Language, available (De Wet, 2008). This

is important since this influenced the number of schools and respondents who could participate in the study (De Wet, 2008).

Therefore, in this study, a convenience or availability sampling study was utilised. Availability/convenience sampling is a non-random sampling method used for practical reasons such as ease of access or willingness to participate. The main reasons for using availability sampling were:

- Limited schools for the deaf in south Africa which include grade 12,
- Owing to the written format of the questionnaires, deaf adolescents will find it difficult to complete (De Wet, 2008).
- Very few schools for the deaf have teachers who could communicate fluently in Sign Language.
- The non-cooperation and lack of knowledge of the authorities and many teachers (" there are currently no minimum qualifications or requirements in order to become a teacher of the Deaf. Internationally, teachers of the Deaf are required to have a master's degree in Deaf education. In fact, to work in Deaf education, you should actually be a specialist in language development, the brain and literacy," she said, adding that "mere access to Sign Language is also not enough") ("SA Is Failing Deaf and Hard-of-Hearing Learners: Can a Bilingual Model of Education Be the Solution to Acquiring Literacy?," 2018).

The negative aspects of using availability sampling are that it might not be typical of the national experience of deaf and hard of hearing youth. The results of this study could therefore not be generalised to the entire population with hearing loss. Nonetheless, there is still value in the study because the information obtained is sufficient for further investigation.

Data Collection: DISSERTATION STUDY

The school for hard-of-hearing learners was an urban school in Gauteng Province which only had seven learners, all in grade 7. The school for the Deaf was located in KwaZulu-Natal. A cover letter explained the purpose of and a description of the research study, as well as instructions for completing the questionnaires. The telephone number, name and postal address of the researcher were provided should anyone wish to acquire further information. Learners were ensured that partaking was of their own free will and that the information from the questionnaires was for the purposes of the dissertation only. They were also informed of the confidentiality of their person to the questionnaires were hand delivered at the schools before and fetched again after completion.

Measuring Instruments. Three measuring instruments were used to gather data on the different variables. These were biographical variables, social-emotional competence, and subjective well-being.

Social-Emotional Rating Scale. The Strengths and Difficulties Questionnaire (SDQ) is a 25-item questionnaire developed to assess behaviours, emotions, and relationships in young children and adolescents. The 25 items are grouped into five scales: hyperactivity-inattention, conduct disorder, emotional problems, peer problems and prosocial skills (Niclasen & Dammeyer, 2016).

1) emotional symptoms (5 items)
2) conduct problems (5 items)
3) hyperactivity/inattention (5 items)
4) peer relationship problems (5 items)
5) prosocial behaviour (5 items)

} 1) to 4) added together to generate a total difficulties score (based on 20 items)

The questionnaire can be completed by parents, teachers or by the children if 11 years or older. The SDQ was first introduced by Goodman, and has worldwide become one of the most widely used instruments in its field (Niclasen et al., 2013). It has been translated into more than 40 languages, including Afrikaans, Xhosa and Zulu.

The reason for using this questionnaire to assess social-emotional competence with, is firstly because it is approved by CASEL (The Collaborative for Academic, Social, and Emotional Learning), which guided the framework used for social-emotional competence in this dissertation. Mark T. Greenberg started his research on social-emotional learning with deaf children a few decades ago. He is a director at CASEL and "holds the Bennett Endowed Chair in Prevention Research in Penn State's College of Health and Human Development" (*Mark Greenberg*, n.d.). Secondly, because it has been used with deaf children and adolescents, with or without hearing controls.

Subjective Quality of Life Rating. The Youth Quality of Life Instruments – Deaf and Hard of Hearing Youth, ages 11-18, Module (YQOL-DHH) was utilized to measure the participants' overall subjective well-being. It was obtained from the University of Washington, Department of Health Services, Seattle WA.

It was developed to better understand the quality of life of youth with varying levels of hearing loss in determining the need for interventions which would best make a positive change. The YQOL-DHH consists of n=32 questions which factor into three subdomains, Self-Acceptance/Advocacy and Participation which are positive, and Perceived Stigma, which is negative, but does not have an overall score. The YQOL instruments use an 11-point (0-10) rating scale with anchors outside the ends of the scale. The YQOL-DHH-specific module is available in self-administered paper-and-pencil.

The paper-and-pencil version was developed at a 4th grade reading level. A reading screener should be used in conjunction with the instrument to assess a 4th grade reading level. The scores per domain are transformed on a scale from 0 to 100. For the Self-Acceptance/Advocacy and Participation domains a higher score indicates a better quality of life. For the Perceived Stigma domain, a lower score indicates a better quality of life.

The internal consistency (Cronbach's alpha 5 .84–.87), reproducibility (ICCs 5 0.79–0.88) have been proven acceptable (Kushalnagar et al., 2011).

Biographical Questionnaire. A biographical questionnaire was compiled to gather information about the age, gender, grade of hearing loss, language used and family involvement of the participating learners.

Data Analysis: DISSERTATION STUDY

Once the completed questionnaires were collected from the participants, the biographical data, the SDQ and YQOL-DHH responses were coded, captured and cleaned to ensure the accuracy.

Non-Parametric Statistical Tests. The sample contained less than 100 participants (N=67) which necessitated the use of non-parametric statistical methods, which refer to tests where you cannot make assumptions on parameters. Parameters are attributes from a population such as the mean and standard deviation of a normal distribution (Altman & Bland, 1999).

Non-parametric tests can still make assumptions, such as that the data are independent.

Shortcomings of non-parametric methods include a lack of statistical strength in comparison to more traditional approaches. This is exacerbated by a small sample size.

The following section contains a description of the statistical methods followed in the analyses of the quantitative data in this study.

Mann-Whitney Test. The Mann-Whitney test (sometimes called the Wilcoxon rank-sum test) is the non-parametric version of the T-test. It is used to determine the significant differences between two sample groups when the sample distributions are not normally distributed, and the sample sizes are small (Howell, 2009). This test was used in the present study to determine the difference between the gender groups in terms of the SDQ and the YQOL-DHH questionnaires.

Kruskal-Wallis One-way Analysis of Variance. When the research hypothesis includes the means of three or more populations and the differences between the sample means have to be tested, the Kruskal-Wallis test can be used. The parametric version is the ANOVA analysis of variance (Howell, 2009), used when three or more groups were compared for variables, which in this studies case were age, parent involvement and the mode of communication used at home.

Descriptive Statistics. Descriptive statistics was used to report on the sample data by investigating the distribution of scores on each variable to determine if it was related to each other (Blanche et al., 2006). This produced the range, minimum and maximum values, the mean, standard error and standard deviation for each scale.

Level of Statistical Significance. Levels of 0,05 and 0,01 of statistical significance are mostly used in scientific research (Blanche et al., 2006). In this study a level of 0,05 applied.

Effect Size. The strength of a result is referred to as the effect. It reports on the difference between two means (Blanche et al., 2006), but because non-parametric statistical methods are used, the effect sizes could tend to be less significant than parametric tests (Blanche

et al., 2006). Therefore, a study could have little practical or clinical significance, even though a study may show results to be statistically significant. For non-parametric assessments, effect levels can be derived from Partial Eta Squared (r), where r = 0,5 and upwards refers to large effect size.

Data Collection: META-ANALYSIS

Because of the small size of the dissertation study, it was augmented by studies done on the main topics of this dissertation. The PRISMA checklist for meta-analysis was used as a guideline (Liberati et al., 2009).

Information Sources. There is no single comprehensive online source of publications on deaf and hard of hearing information, therefore, in the search for relevant literature for this study, several databases were searched for studies published to 2020: deaf related and general. These are Gallaudet University Library, Rochester National Technical Institute for the Deaf, American Annals for the Deaf, Deafness & Education International, Journal of Deaf Studies and Deaf Education, Google Scholar, and my own library on Zotero.

Zotero: Sources relevant to this dissertation's topic, have been collected since 2012 and the library contains roughly 2500 deaf related documents which are already grouped in different divisions. The database contains documents from 1943 to 2020 *[Zotero is a free and open-source reference management software to manage bibliographic data and related research materials, such as PDF files, Journal articles, Books, Presentations, etc. It is produced by the Centre for History and New Media at George Mason University].* (Some of the sub-divisions related to social-emotional competence, well-being, communication, and family involvement in deaf adolescents were audism,

resilience and coping, deaf culture, deaf identity, early intervention and screening, deaf education, emotional development, social development, well-being, deaf mental health, family, friendship, type of schooling, social-emotional learning, strengths and difficulties and quality of life).

Example of the Search Method: Searching google scholar, the key words included were “social-emotional” AND “well-being” AND “deaf”, because deaf individuals have different requirements for well-being domains, - in the title - which delivered no 0 documents. Then “social-emotional” AND “well-being” AND “deaf” - in the whole document - excluding “cochlear”, “academic”, and “parent” which delivered 588 documents. Scrolling through the first three pages, it was clear that very few of the articles were related to the topic of social-emotional competence and well-being in deaf adolescents. A new search: allintitle: “deaf” "social emotional" "well being" excluding -cochlear -academic -parent - did not match any articles; allintitle: deaf "wellbeing", excluding -cochlear -academic -parent - delivered about 64 articles, but most relevant studies used more specific domains of social-emotional competency skills to find a relation to well-being e.g., self-confidence and well-being. The next search included only “deaf” AND “well-being”, excluding -cochlear -academic -parents, since 2018 - delivered 12 results. Studies related to medical conditions, parents’ perceptions, cochlear implants, late deafened adults and containing only one skill of social-emotional competency were eliminated, which left no new studies related to the topic.

Using the official website for the Strengths and Difficulty Questionnaire (https://www.sdqinfo.org/), under articles, the keyword “deaf” and “hard of hearing” produced 15 publications. After eliminating those articles with physiological factors, pre-school

children, children with cochlear implants and executive functioning, 5 studies were left.

Going back to google-scholar, the keyword “strengths and difficulties” delivered an article of a meta-analysis which was done on using the SDQ questionnaire with deaf children, which included the 5 studies found on the SDQ website and was published in 2015 in the European Child Adolescent Psychiatry, (Emotional and behavioural difficulties in children and adolescents with hearing impairment: a systematic review and meta-analysis). This article was then used as an augmenting study in for this dissertation.

Meta-analysis done by (Stevenson et al., 2015) . In the meta-analysis of Stevenson et al. (2015) two quantitative reviews were undertaken on publications on emotional and behavioural disfunctions in deaf and hard of hearing children. One was where different measures were used and the other was using the Strength and Difficulties Questionnaire (SDQ), which is the part used in this analysis.

The criteria for inclusion was a summary statistic, on either a continuous scale (means and SD) or in categorical form (percentage with abnormal scores) for youth with a hearing loss. It could have been any of the Parent, Teacher or Self-rated versions of the SDQ. All versions of the SDQ includes about 25 questions divided between 5 scales. If the effect size was positive, it indicated a lower Prosocial score for children with a hearing loss compared to the hearing control group, but higher scores for children with hearing loss on the other SDQ sub-scales and Total Difficulties. The included studies could either be compared with a hearing control group or with population norms. After study selection and exclusion, 12 studies were included, summarized in Table 3.

Table 3

Characteristics of studies on EBD in children and adolescents with a hearing loss using the SDQ

Study	Country	N	Age Deaf/HOH in years	SDQ ratings	Hearing controls
Anmyr et al.	Sweden	22	9-15	P,T,S	None
Cornes and Brown	Australia	54	11-18	P,T,S	None
Dammeyer	Denmark	334	6-19	T	None
Dammeyer	Denmark	17	3-17	T	None
Fellinger et al.	Austria	99	6:5-16	P,T	None
Hintermair	Germany	213	4-12	P	None
Hogan et al.	Australia	119	5:5-7:5	P	Approx. 8000 normal-hearing children
Huber and Kipman	Austria	35	12-17	P,T,S	212 normal-hearing adolescent peers (mean age 15.0, ranging from 12.3 to 17.9 years)
Mejstad et al.	Sweden	111	11-18	P,T,S	None
Stevenson et al.	UK	107	5:5-11:8	P,T	Comparison group of 63 children with normal hearing aged 6:4 to 9:10, born at the same hospitals as those with PCHI
Timmerman et al.	The Netherlands	160	4-7	P	None
Vetter et al.	Germany	57	6:11-12:7	T	None

Data Analysis: META-ANALYSIS

The Typical Hearing Comparison Groups. The studies included in the meta-analysis differed from having no controls, their own control group, or they have used a large general population sample to compare with. There were ample general population studies available providing norms for the SDQ.

A standardized mean difference was provided for each study between children with and without hearing loss, for which the weighted Hedges' *g* was used. The *metan* command in Stata was used to do a meta-analysis with the mean differences and also meta-regressions. The

dependent variable was the Hedges' *g* and age the independent. This was done in order to measure if changes in the differences in behaviour between children with hearing loss and hearing controls, changed in magnitude with age. Since different countries had different research groups with different samples, it was unlikely that the effect sizes of these studies were functionally equivalent. Therefore, a random effects model was used to estimate the overall effect sizes.

However, because the general population studies used different samples for normative comparisons, it would have created a misrepresentation of the standard error of the Hedges'g. The Hedges'g gave an indication of how hearing children differed from children with a hearing loss by measuring the standardized mean difference in scores. To overcome this problem, and to include studies with no control groups, the effect sizes for the impact of hearing loss on SDQ scores, were done using a common population sample to provide comparison data for all the studies.

Summary

The sources used in this dissertation were pulled together in this chapter. Personal experience, a research study done by the author in 2012/13 and the literature study for the current dissertation, were described.

Further, the general limitations of deaf related studies were laid out, as well as the research design.

Results and Discussion

Introduction

This chapter firstly reports on the results of the fieldwork conducted for this study, starting with, the sample's biographical details, and the statistical results produced from their responses. This is followed with the meta-analysis done by (Stevenson et al., 2015).

The results section is followed by a discussion of the important assumptions which was made from the results of the dissertation study, the meta-analysis review, as well as other references and will be reported in conjunction with each other.

Results: DISSERTATION STUDY

Biographical Details of the Study Sample

In Chapter 4, it was mentioned that 67 questionnaires were received from deaf adolescent students. The completed questionnaires were personally collected from the schools. The biographical details of the participants are presented in Table 4.

The biographical questionnaire was not fully completed by all the respondents, as indicated in Table 4. The missing answers was referred to in the table as not indicated.

In all the categories of the sample group, there were variations in terms of the distribution were:

Gender indicates only a slight skewing, with females making up 56,7% of the sample and males only 43,3%.

Grade: This group also indicates that 43,3% falls in grade 7, 34,3% in grade 9 and much less in grade 12, 7,5% and PVIA (or FET), 14,9%.

Together, no and sometimes concerning **Parent Involvement** was much greater at 73,2% compared to parents who are involved (26,8%).

Mode of communication at school: The school in KwaZulu Natal is one of the few schools in South Africa where all of the teachers use Sign Language, which meant that it could not be used as a variable in this study.

In terms of the **mode of communication at home**, the distribution reveals that about a quarter (25,4%) of the learners use an oral means of communication at home, 29,80% uses Sign Language, 35,8% uses both and 9% writes.

Table 4

Biographical Details of the Study Sample

Variable	N	Percentage of the Sample (%)
Gender		
Male	29	43,3
Female	38	56,7
Total	**67**	**100,0**
Grade		
7	29	43,3
9	23	34,3
12	5	7,5
PVIA	10	14,9
Total	**67**	**100,0**
Age		
12 years	1	1,5
13 years	7	10,5
14 years	10	14,9
15 years	8	6
16 years	17	25,4
17 years	7	10,5
18 years	4	6
19 years	1	1,5
20 years	2	3
21 years	1	1,5
Not indicated	9	10,2
Total	**67**	**100,0**
Parent Involvement		
None	17	25,4
Sometimes	32	47,8
Very	18	26,8
Total	**67**	**100,0**
Mode of Communication at School		
Oral	**7**	**10,4**
Sign Language	**57**	**85,1**
Both	**3**	**4,5**
Total	**67**	**100**
Mode of Communication at Home		
Oral	17	25,4
Sign Language	20	29,8
Both	24	35,8
Write	6	9
Total	**67**	**100**

Descriptive Scores for Adolescent Sample with Hearing Loss for the SDQ and YQOL Questionnaires

Table 5

Overall Results for Adolescents with Hearing Loss

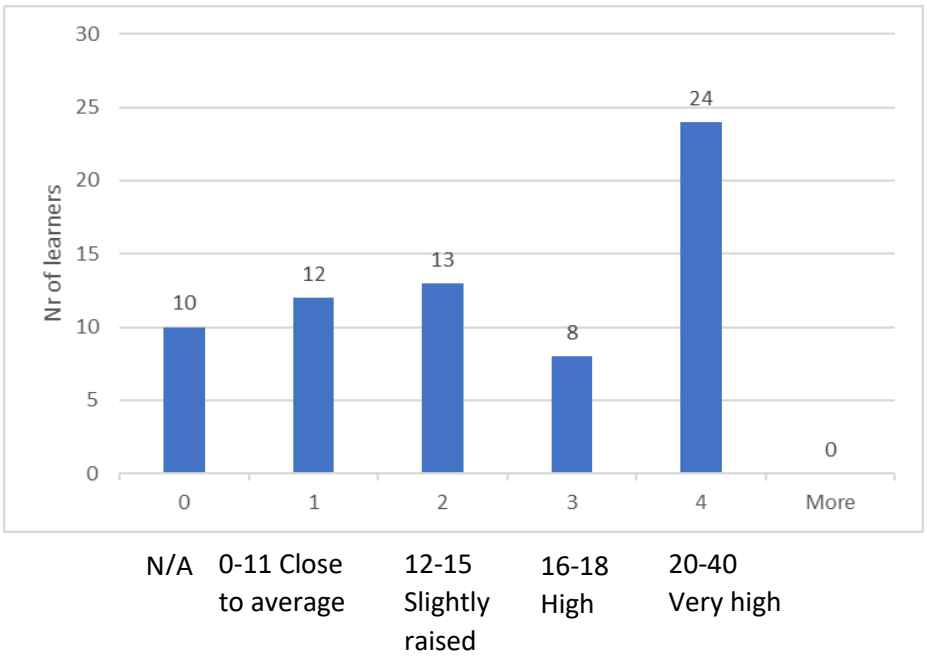
Variable	N	Range	Minimum	Maximum	Mean	Standard Error	Standard Deviation
SDQ scale							
Hyperactivity	57	10	0	10	4.192	0.279	2.108
Conduct	57	10	0	10	3.947	0.311	2.348
Peer Problems	57	10	0	10	3.385	0.264	1.997
Emotional	57	10	0	10	4.649	0.364	2.748
Prosocial Score	57	10	0	10	6.877	0.328	2.478
Total difficulties	57	40	0	28	16.17	0.898	6.782
YQOL-DHH							
Self-acceptance/Advocacy	63	71	0	100	59.580	1.721	13.666
Perceived Stigma	64	85	0	100	51.191	2.174	17.392
Participation	58	86	0	100	56.344	2.05	15.61

In this section, descriptive statistics were used according to the different measuring instruments (the SDQ and the YQOL-DHH) by biographical variable. For the SDQ, the total difficulty score (which includes the emotional, conduct, hyperactivity, and peer relationships) and the pro-social scale, will be reported on. For the YQOL-DHH three different scores were reported, namely the Self-acceptance/Advocacy, Perceived Stigma and Participation.

Table 5 gives the results of the range, minimum and maximum values, the mean, standard error and standard deviation for each scale in which teachers rated the SDQ and the participants scored the YQOL-DHH themselves, regarding the various aspects.

Figure 4

Distribution of Sample for Social-Emotional Competence (SDQ)



For the **SDQ questionnaire** which assessed social-emotional competence, 10 learners' questionnaires were not received which made the sample group N=57. No outlier scores were indicated. The mean score for total difficulties was 16.17. This falls in the high range of social-emotional problems, as shown in the histogram. (the higher the total difficulties score the more significant the problems). This four-fold classification is divided in (1) and (2) the 'abnormal' categories, each containing around 5% of the general population, (3) slightly raised, 5% and (4) close to average, 80%. These percentages were based on a large sample in the UK (Stevenson et al., 2015).

Results for the SDQ and the YQOL-DHH according to Biographical Variable

In the following sections social-emotional functionality and well-being are compared in terms of the different biographical variables.

Results by Gender

The Mann-Whitney test was used for gender. The results indicated that there are no significant differences between males and females for the Total Difficulties and Pro-social Scales of the SDQ.
There were also no significant differences between the genders for the Self-acceptance, Participation and Perceived Stigma of the Quality-of-Life questionnaire (YQOL-DHH).

Table 6

Results by Gender

Variable	Gender	n	Mean Rank	U-Value	Exact Significance (two-tailed)	Point Probability
SDQ scale						
Prosocial Score	Males	29	24.82	295.5	0.147	0.337
	Females	37	28.95			
Total difficulties	Males	29	26.3	332.5	0.018	0.764
	Females	37	27.62			
YQOL-DHH						
Self-acceptance/Advocacy	Male	27	29.5	418.5	0.014	0.352
	Female	31	33.88			
Participation	Male	23	27.74	362	0.002	0.779
	Female	36	29.03			
Perceived Stigma	Male	27	28.48	391	0.028	0.1902
	Female	31	34.64			
p≤0,05						

Results for Age. For Grades, Kruskal-Wallis One-way Analysis of Variance was used. The key output includes the point estimates and the p-value. The ages of the sample variated from 12 – 21 years. Three age groups were used: 12-14, 15-17, and 18-21. The results indicated that for the three age groups, no significant differences were found for the Pro-

social scale of the SDQ, and for the Participation and Perceived Stigma Scales.

As for the Total Difficulties and Self-acceptance scales, significant differences were found, and both scales were further tested, two age groups at a time, using the Mann-Whitney test.

Table 7

Results by Age

Variable	Age Group	n	Mean Rank	Asymptotic Significance
SDQ scale				
Prosocial Score	12-14	18	9.5	
	15-17	20	10.1	0.28892
	18-21	7	4	
Total difficulties	12-14	18	9.823	
	15-17	20	10.305	0.00151
	18-21	7	4	
YQOL-DHH				
Self-acceptance/Advocacy	12-14	17	9	
	15-17	30	15.5	0.00819
	18-21	8	4.5	
Perceived Stigma	12-14	15	8.5	
	15-17	23	16.2	0.35757
	18-21	7	4.5	
Participation	12-14	15	8	
	15-17	26	13.5	0.65447
	18-21	7	4	

Outcomes of age groups were compared on Self-acceptance/Advocacy using the Mann–Whitney two-sample rank-sum test. The difference between the 12-14- and 15-17-year olds was not significant with a U-value of 230.5, a Z-Score of 0.99547 and a p-value of 0.31732 at $p < .05$. However, the differences between the 12-14- and 18-21-year olds, and 15-17- and 18-21-year olds, were both significant for Self-acceptance/Advocacy with the 18-21-year-old group having higher self-acceptance and advocacy, as indicated in table 7.

Outcomes of age groups were also compared on the Total Difficulties scale of the SDQ questionnaire, again using the Mann–Whitney two-sample rank-sum test. The difference between the two older

groups, 15-17- and 18-21-year olds, was not significant in this instance, with a U-value of 58, a Z-Score of 0.27235 and a p-value of 0.78716 at $p < .05$. However, the differences between the 12-14- and 15-17-year olds and 12-14- and 18-21-year olds were both significant for Total Difficulties with the 12-14-year-old group having higher social-emotional and behaviour problems, as indicated in table 8.

It has to be cautioned that the approximation to a normal distribution becomes weaker when sample sizes are smaller than 10, making use of the Z-value calculation, may not be appropriate.

Table 8

Results by Age Groups

Variable	Gender	n	Mean Rank	U-Value	Exact Significance (two-tailed)	Point Probability
SDQ scale						
Total difficulties	12 - 14	18	23.41	61	0.302	0.00252
	15 - 17	19	12.89			
	12 - 14	18	15	17	0.310	0.00758
	18 - 21	7	6.43			
YQOL-DHH						
Self-acceptance/Advocacy	12 - 14	18	10.61	20	0.321	0.00424
	18 - 21	8	20			
	15 - 17	31	17.65	51	0.335	0 .01174
	18 - 21	8	29.12			
p≤0,05						

Comparison on Family Involvement. In Table 9 below the results are given for the total difficulty score constructs in terms of family involvement. A comparison was made between the three groups, which were, no involvement, sometimes involved and very involved, using the Kriskal-Wallis (2-tailed) test.

For Prosocial and Total Difficulties, no significant difference between the groups were found.

Table 9

Results by Family Involvement

Variable	Family Involvement	n	Mean Rank	Asymptotic Significance
SDQ scale				
Prosocial Score	None	14	27.4	
	Sometimes	31	28.02	.96867
	Very	8	27.61	
Total difficulties	None	14	18.54	
	Sometimes	29	24.21	.33127
	Very	8	25.11	

Comparison on Grades. There were four grades indicated, grades 7 (n=29), 9 (n=20), 12 (5) and a vocational band (n=13). The vocational band did not return the SDQ questionnaires. Using the Kruskal-Wallis test (Table 10), the outcome was not significant for the Prosocial scale with a H of 1.0134 and a p-value of 0.60247, and also not for Total Difficulties with a H of 4.4265 and a p-value of 0.10935. The YQOL-DFF questionnaire's outcomes were respectively: Perceived Stigma, H = 5.0024 and a p-value of .17162, no significant differences; Participation scale, H = 2.1252 and a p-value of .54683, no significant differences; the Self-acceptance/Advocacy scale, H of 13.888 and a p-value of 0.00306, significant results, and were further tested with the Mann-Whitney two-group test.

The outcome of the Mann-Whitney (Table 11), two-group tests for the Self-acceptance/Advocacy scale showed a significant difference between learners in Grade 7 and Grades 9 & 12, with the Grade 7 learners scoring higher, which indicates better self-acceptance.

Table 10

Results by Grades

Variable	Grade	n	Mean Rank	Asymptotic Significance	*p*
SDQ scale					
Prosocial Score	7	23	22.239		
	9	18	23.611	1.0134	0.60247
	12	5	28.9		
Total difficulties	7	23	28		
	9	18	15.74	4.4265	.10935
	12	5	13.2		
YQOL-DHH					
Self-acceptance/Advocacy	7	21.50	41.05		
	9	33.32	41.05	13.8888	.00306
	12	5	56		
	Vocational	10	33.50		
Participation	7	30	31		
	9	22	30.36	2.1252	.54683
	12	5	43		
	Vocational	6	33.83		
Perceived Stigma	7	28	31.52		
	9	22	35.34	5.0024	.17162
	12	5	48.50		
	Vocational	10	26.1		

Table 11

Results by Grades

Variable	Grades	n	Mean Rank	U-Value	Exact Significance (two-tailed)	Point Probability
YQOL-DHH						
Self-acceptance/Advocacy	Grade 7	33	21.50	180		0.0056
	Grade 9	22	33.32			
	Grade 7	33	15.82	9.5		.00222
	Grade 12	5	31.1			
	Grade 7	33	19.72	126.5		.47152
	Vocational	10	22.85			
	Grade 9	22	19.9	25.5		.0703
	Grade 12	5	18			
	Grade 9	22	17.52	87.5		.37346
	Vocational	10	14.25			
	Grade 12	5	11	10		.07508
	Vocational	10	6.5			

p≤0,05

Results: META-ANALYSIS (Stevenson et al., 2015)

Results for the Strength and Difficulties Questionnaire (SDQ)

The results were described according to the Total Difficulties score, the four subscales and the Pro-Social scale.

1) emotional symptoms (5 items)
2) conduct problems (5 items)
3) hyperactivity/inattention (5 items)
4) peer relationship problems (5 items)
5) prosocial behaviour (5 items)

} 1) to 4) added together to generate a total difficulties score (based on 20 items)

A standardized mean difference was provided for each study between children with and without hearing loss, for which the weighted Hedges' *g* was used. The *metan* command in Stata was used to do a meta-analysis with the mean differences and also meta-regressions. The independent variable was age and Hedges'*g* the dependent variable in order to assess whether age had an influence on the level of behavioural differences between children with hearing loss and controls. Because the samples originated from different countries and were studies by different researchers, it was unlikely that the effect sizes of these studies were functionally equivalent. Therefore, a random effects model was used to estimate the overall effect sizes.

Emotional Symptoms

A significant association was found between hearing loss and hearing loss and higher Emotional Symptoms (for Parent ratings only).

Conduct Problems

Significantly more Conduct Problems were found for children with hearing loss (for Teacher ratings only).

Hyperactivity

For all raters, there was no association found between children with hearing loss and more Hyperactivity.

Peer problems

Peer Problems rated the highest of the SDQ scales for children with hearing loss, suggesting this the highest risk for emotional and behavioural disfunctions.

Table 12

Effect sizes (Hedge's g) for SDQ sub-scales rated by parents and teachers using random effects estimates for the studies overall

Study	No. of studies	Overall			
		g	95%CI	*Z*	*P*
Total difficulties					
Parent	10	0.23	0.07, 0.40	2.77	0.006
Teacher	9	0.34	0.19, 0.49	4.39	0.001
Emotional symptoms					
Parent	10	0.21	0.08, 0.32	3.43	0.001
Teacher	6	0.14	−0.03, 0.30	1.62	0.106
Conduct problems					
Parent	10	0.16	−0.03, 0.35	1.65	0.100
Teacher	6	0.22	0.10, 0.34	3.62	0.001
Hyperactivity					
Parent	10	0.05	−0.06, 0.16	0.91	0.363
Teacher	6	0.03	−0.16, 0.22	0.34	0.735
Peer problems					
Parent	10	0.27	0.05, 0.49	2.40	0.016
Teacher	6	0.35	0.14, 0.57	3.23	0.001
Prosocial behaviour					
Parent	10	0.30	0.08, 0.52	2.61	0.009
Teacher	6	--0.10	−0.31, 0.12	0.88	0.376

Prosocial Behaviour

Significantly less Prosocial Behaviour were reported in children with hearing loss (for Parent ratings).

Total difficulties score: The total difficulties score is generated by adding the scores from four scales; the emotional symptoms, conduct problems, hyperactivity, and peer problems. The prosocial scale is scored separately. Scores are in the range of 0 to 40.

The results of this paper showed that children and adolescents with hearing loss will probably show a higher rate of emotional and behavioural problems compared to hearing controls – a Total Difficulty score 0.23 of a SD above typical hearing children and adolescents (as rated by Parents and Teachers).

Discussion

The social-emotional competence and well-being profiles of the sample of deaf and hard of hearing adolescents in the South African public school system were explored. The statistical results from the previous chapter served as the basis for interpretations made and is discussed below.

Individuals with a hearing loss definitely face challenges in life in every phase of development, which requires a different and more intensive approach from parents, teachers, society, and the authorities, than with hearing individuals; if they are to be provided by a platform from where they have an equal chance in life to reach success (however it is defined by the individual) and well-being.

Risk and Mediating Factors

Although risk and mediating factors on the deaf adolescent's well-being were explored in the literature study (chapter 3), it was not all directly examined in the dissertation study and meta-analysis, but it needs to be considered in interpreting the findings.

Social-Emotional Competence (SDQ)

In the meta-analysis done by (Stevenson et al., 2015), the results, Parent and Teacher rated, suggested that deaf and hard of hearing children and adolescents up to the age of 21 years are likely to show higher emotional and behavioural disorders on the SDQ, measured against hearing children. An overall social-emotional problem

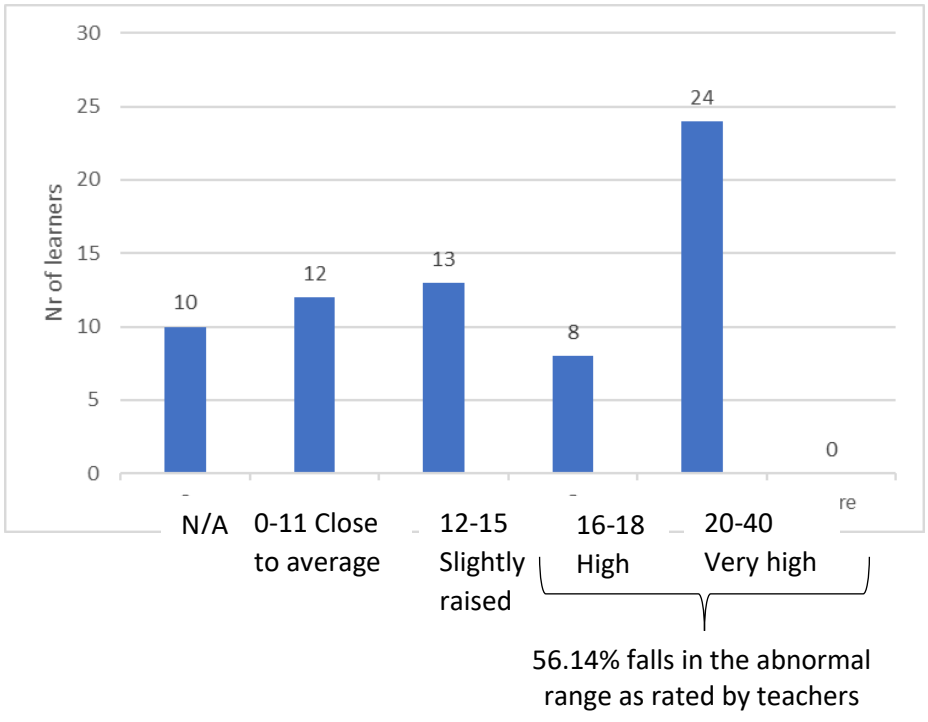
score (the Total Difficulties score is produced by adding scores from the following four scales; emotional symptoms, conduct problems, hyperactivity, and peer problems, excluding the prosocial scale) of 0.23 for parent ratings and 0.34 for teacher ratings of a SD above that of typical hearing children were found.

The outcome of this dissertation 'sample, showed 56% of the deaf adolescents' fell in the 'abnormal' range for Total Difficulties. In testing the different age groups against the Total Difficulties, significant results were found between the younger group (12-14 years) and the two older groups (15-17 and 18-21 years), with the younger group having higher scores, meaning they were rated as having more social-emotional and behavioural problems (teacher rated).

In a study also done in South Africa, Vries et al. (2018) used the SDQ to assess the social and emotional behaviour of typical hearing children. Using the UK cut-off values for the South African

Figure 5

Range for Total Difficulties of SA Deaf Adolescents



sample led to very high rates of abnormal scores for Emotional Symptoms, Peer Problems and on Total Difficulties. The South African hearing adolescents rated 26 and 34% in the 'abnormal' range for the two scales: emotional and peer problems, where the normative expectation was in contrast to the normative expectation of 10% (Vries et al., 2018).

Well-being

Part of the current study was also to investigate the inferences that can be made concerning the dynamic processes of the development of the well--being of the group of adolescents with hearing loss from schools for the Deaf in South Africa, and how, over time, the different variables influence their level of well-being. QOL was defined as "youths' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns" (Patrick et al., 2011).

Well-being Subdomains

The three subdomains important for quality of life or well-being of deaf and hard of hearing adolescents, were identified (by the YQOL-DFF study) as **self-acceptance and advocacy, perceived stigma, and participation.**

(1) Self-acceptance and self-advocacy:

The questions asked in this subdomain were:

- *I like who I am.*
- *As a person who is deaf or hard-of-hearing, I am satisfied with the ways I have to communicate.*
- *As a person who is deaf or hard-of-hearing, I feel okay asking for what I want in public places.*
- *I know how to stand up or speak up for myself as a person who is deaf or hard-of-hearing.*

- *I feel okay telling my teacher about my needs.*
- *Same independence as others.*
- *Included in family.*
- *As a person who is deaf or hard-of-hearing, I feel there are enough things to do with people other than my family.*
- *Accepted by students.*
- *I feel other youth are willing to help me when I need it as a person who is deaf or hard-of-hearing.*
- *I feel I have enough technology, such as pagers, videophones, texting, and/or internet to communicate as a person who is deaf or hard-of-hearing.*
- *My teacher(s) helps me to communicate easier in the classroom as a person who is deaf or hard-of-hearing.*

This section identified several areas of importance for the well-being of deaf adolescents: self-confidence, self-efficacy, a sense of self, autonomy, identity, belonging, interpersonal relationships with family, teachers, and peers as well as, very importantly, communication.

For the dissertation's sample, no significant differences were found for the Self-acceptance/Advocacy scale and gender. Age played a role, where the older group (18-21) had better self-acceptance. However, when tested for grades, the lower grade (Grade 7) showed stronger self-acceptance and advocacy.

Kushalnagar et al., (2011) found Self-acceptance/Advocacy was higher if adolescents perceived the ability to understand communication with parents, as good (Kushalnagar et al., 2011).

(2) Perceived stigma [perception of discrimination],

- *I feel people make fun of me because I am deaf or hard-of-hearing.*
- *I feel people bully me because I am deaf or hard-of-hearing.*
- *I feel embarrassed when people stare at me because I am deaf or hard-of-hearing.*
- *I feel people think I am dumb because I am deaf or hard-of-hearing.*
- *I feel embarrassed to ask people to repeat themselves because I am deaf or hard of hearing.*

- *I feel people who are hearing treat me badly because I am deaf or hard-of-hearing.*
- *I feel like my parents protect me too much because I am deaf or hard-of-hearing.*

In this section, perceived stigma, negative attitudes of society, enacted stigma, social stigma/discrimination, coping/resilience and communication with typical hearing people, and the ability to participate fully in the classroom and social settings, were several areas identified as important for the well-being of deaf adolescents. When adolescents perceived communication difficulties, it was significantly associated with higher Perceived Stigma related to being deaf or hard of hearing (Kushalnagar et al., 2011). The perception of stigma and the ability to participate fully in the classroom and in social settings are important for social-emotional competence and well-being.

(3) Participation [taking part in community activities]

- *Because I am deaf or hard-of-hearing, I feel left out of family conversations.*
- *I feel it is hard for me to understand what people are saying because I am deaf or hard-of-hearing*
- *Because I am deaf or hard-of-hearing, I have to work harder than other youth to do the things I want to do*
- *Because I am deaf or hard-of-hearing, I feel it is hard to participate in large groups*
- *Because I am deaf or hard-of-hearing, I feel what I want to do in the future is limited.*
- *Because I am deaf or hard-of-hearing, I feel I miss things when talking with people who are hearing.*
- *I feel I miss things when talking with people who are deaf or hard-of-hearing.*
- *Because I am deaf or hard-of-hearing, I feel I miss out on activities and things I want to do.*

- *I feel I miss what is important for me to know because I am deaf or hard-of-hearing.*

Important for well-being in this section were identified as: perception of their future, inclusion and participation, engagement, opportunities, isolation, locus of control, relationships, family acceptance and communication. When adolescents perceive the communication with parents to be well understood, they also perceived Participation to be significantly better (32.2 points lower mean Participation scores) (Kushalnagar et al., 2011). Higher participation scores were the only domain associated with socioeconomic status (SES), including college educated mothers, which could be attributed to children of access to high quality healthcare, more costly interventions, and assistive technologies (Kushalnagar et al., 2011).

A Discussion of Deaf Children's and Adolescents' Circumstances Prohibiting them from Attaining Well-being

Can You Hear Me Now?

In 2005 a deaf man (Shane Spurlock) in Sacramento, USA, committed suicide because of mental health problems. He was only 38 years old (Beckner, 2006).

Shane's story represents the life of the general deaf person fittingly and lent itself to emphasize important points brought forward in this dissertation. The story itself will be presented in cursive print, and the applicable point of discussion be underscored with other literature in normal print.

Mental Health and Well-being

He has been searching for a therapist for a few years, without success, while in the meantime, relying on his doctor (a general practitioner). Due to a communication mismatch, the doctor kept on guessing at Shane's condition(s) and medication. Continuing trying new

medications, Shane developed negative side effects, while still unable to find a therapist.

"[Shane] was of the percentage of deaf who have the typical childhood, the anxiety and the chemical propensity for depression and wasn't able to overcome it," Michelle recently said at a public meeting. "For those people who can't overcome it, this is just a death sentence."

According to the World Health Organization (2013), positive mental health experiences is one of the critical factors which consistently lead to well-being (Gascon-Ramos, 2008).

Unfortunately, as stated in 1.2 of this dissertation, in South Africa, significant barriers are encountered when a deaf child (or adult) needs to consult a mental health professional, with diagnoses often made when they do, for deaf children and adults alike (Smit & Henderson, 2010). Since 1997, the South African Schools Act caused most "clinical staff" to be phased out of the Schools for the Deaf (Smit & Henderson, 2010), leaving many deaf children to fend for themselves.

The Deaf Self: Self-Awareness, Self-Acceptance, and Identity

A therapist appropriate for counselling a deaf person, would be someone who could give them direct and private access. Someone who had knowledge of Sign Language, who understood the Deaf culture and in what aspects it differs from hearing people's culture and what psychological effect a hearing loss and social isolation has. Not one therapist they saw was aware…, and he kept trying to tell them..

> *" Do you see how I feel like I'm on the fence, like I'm pretending to fit into both worlds and not feeling that I fit into anything? And they just didn't get it."*

One of the most crucial tasks during adolescence is the creation of an identity (Zand & Pierce, 2011). The construction of an identity develops through different experiences, relationships and making sense of the world. Their opinions of their worlds will be greatly influenced by the relationships they are involved in - including the feedback from

the social world, which again will have an important influence on how they will see themselves (self-concept), their self-esteem and the formation of their identities (Gascon-Ramos, 2008; Edwards, 2007; Zand & Pierce, 2011). Having other people believing in them is thus key to the development of self-esteem (Convertino et al., 2014; Jambor & Elliott, 2005). Communication and language development are key to a positive reception from the social world, better adjustment, and self-management (Zand & Pierce, 2011).

Development of social-emotional competence – inclusive of getting to know oneself and establishing a clear and consistent sense of self, self-efficacy and self-confidence leading to self-esteem and self-mastery, plays a particularly important role. To illustrate, a positive association has been found between high school student's experiencing life satisfaction and in having well-developed self-concepts (McCullough & Heubner, 2003) typified in a belief in their own competence to set and attain goals (Wissing, 2013).

Together with a perspective that they have the ability to manage environmental demands effectively, this demonstrates a sense of mastery which, according to Thorne & Kohut (2007) have an important influence on coping mechanisms which again influence well-being.

When a healthy self-concept converges with the ideal self, it is indicative of an adolescents mental health and perceived quality of life (Jambor & Elliott, 2005), and will have a powerful impact on his/her cognition, motivation, emotions, and behaviour (Edwards, 2007).

The Family

Ninety percent of deaf babies are born to hearing parents, and those hearing families traditionally have consulted with hearing physicians and speech therapists who warned them to discourage Sign Language. This leaves

deaf adults fuming. Many deaf adults grew up in isolation and suffer serious untreated anger issues. Most of their families never learn to sign.

"It starts when children are little," said Diamond. "Parents have no communication with their children. They do not sign with them. … They have an internal, built-in frustration, and they grow up with anger. I have a friend who was molested twice, a dear friend, and she could not tell anyone. She couldn't tell her parents."

"Parents have no communication with their children," said Lois Diamond, of Sacramento County's Disability Advisory Committee. "They don't sign with them. … The children have an internal, built-in frustration, and they grow up with anger."

Shane also grew up in a family that did not learn to sign. "He tricked his family," said Shane's mother, Patricia Spurlock, who said she never realized how little he could hear. "We thought he was understanding what we were saying," she said.

"Most hard-of-hearing people have learned to 'pretend' to understand what is being communicated," warned local advocate Sheila Conlon Mentkowski.

Birchell herself grew up deaf with parents who never learned to sign. "[My mom] was following what the audiologist said. Very biased. They say, 'Oh, Sign Language will cause you to be an aural failure. If you want them to succeed in the world, you do not use Sign Language.'"

Michelle remembered how the fear of interacting with insensitive people in the hearing world would keep Shane at home fuming and disappointed with himself.

"Unfortunately, there's a huge gap between the real-life world for deaf adults and these people who view deafness as a pathology, something that needs to be fixed."

"[Shane] was of the percentage of deaf who have the typical childhood, the anxiety and the chemical propensity for depression and wasn't able to overcome it," Michelle recently said at a public meeting. "For those people who can't overcome it, this is just a death sentence."

Deaf children raised in deaf environments learn about their differences to hearing people as "one more fact of life" while deaf children raised in hearing families "might go through a painful

process of denial, misattribution, loneliness and sadness" (Gascon-Ramos, 2008). In addition, "if Deaf persons were to believe that they are disabled, it is because they experience contempt and shame before others (hearing) in the public space especially at school, and therefore their dignity is compromised" (Taylor cited in Mcilroy, 2008).

Communication

ASL, with its unique syntax and grammar, is the preferred language of deaf adults but long has been considered a crutch by doctors and educators. This is changing now that studies suggest that deaf children taught ASL as their native language find it easier to learn English as a second language. Still, many of today's deaf adults grew up with experts who recommended they try to master English, even if they were born deaf and had no idea what language sounded like.

"Yeah," said Diamond, "we're talking about how lucky kids are nowadays. We talk about that, but people forget about us. It is like we were born in the wrong years. We still have a long way to go in our life, and there are many of us who still need help."

"I don't know how it's still allowed that you don't have to provide communication for a child," said Michelle. "You couldn't have a kid who needs a wheelchair to get to school and have a parent say, 'No, you will learn to walk. I will give you knee pads and elbow pads, and you will commando your ass to school, and one day you will learn to walk just like the other kids.' … But you can have a deaf child and not communicate with them, not bond with them, not understand them."

In South Africa, most parents and their deaf children only share a few signs made up from the language the parents speak (Swanepoel, 2012), which means that there can be no meaningful exchange of ideas and information and they cannot provide the necessary support for adolescents enquiring into more complex social and emotional issues (Calderon & Greenberg, 2011; Mayberry et al., 2011; Kusche et al., 1983). When deaf adolescents perceived communication as satisfactory and could exchange ideas and information – specific to their

microsystem (such as at home and school) – it had a range of positive effects (Kushalnagar et al., 2011). There was a significant association with perceived quality of life related to self (including higher self-esteem), in relationships, and participation, as well as lower reported depressive symptoms and lower perceived stigma about being deaf or hard of hearing (Kushalnagar et al., 2011), they could, by internalizing thoughts, better understand other people's thinking and feelings (theory of mind) (Kushalnagar et al., 2011).

Contradictory, when communication at home is not accessible, the youth experience a social barrier and has difficulty participating in conversations with their parents. This barrier in the youth's home environment can result in adverse impacts on the youth's overall socio-emotional well-being as well as parental participation in the youth's academic success (Gascon-Ramos, 2008).

In other words, if the deaf youth is in a school where the teachers do not use Sign Language, and at home with an all-hearing family, it is not surprising that they would self-report higher levels of difficulty understanding conversations and perceived stigma.

The School Environment

In conversation, a bitter, mirthless laugh bursts out whenever the topic turns to education and childhood, like when Michelle reminded her friends that hearing babies and even chimps are taught to sign, but many experts still do not want to teach the deaf kids, or recalling teachers whacking deaf students on the knuckles for signing in class or had them sit on their hands to keep them from relying on their "secret language."

The school environment correlate closely with the development of a deaf child's culturally Deaf and bi-cultural identities and positive adult self-esteem (Bat-Chava, 2000; Jambor & Elliott, 2005). Self-esteem is nurtured when deaf children and adolescents live "Deaf

oriented lives" (Gascon-Ramos, 2008). This means, for example, using Sign Language and being part of the Deaf social group, - and not merely being audiological deaf (Gascon-Ramos, 2008; Zand & Pierce, 2011). When Deaf youth do not have the opportunity to live "Deaf oriented lives", they are more likely to accept stigmatisation submissively (Bat-Chava, 2000).

Authorities

Michelle and Megan have been telling Shane's story for months, hoping to jump-start services that will help generations of deaf adults. Now, Michelle's thinking about returning to school to study deaf education.

"I don't know how long I would have had my dad," Megan, now 11 years old, recently told a group of county policymakers, "but I know he would have been here longer if he had help."

Counties get to decide how to spend the windfall, but it is challenging to rank priorities. Subgroups like the deaf and hard of hearing pleaded their case to advisory committees, then task forces and then steering committees, all to carve out a portion of the county's first $130 million.

Authorities in South Africa gravely fall short in providing adequate support for deaf children and adults alike, financially and in their policies concerning the Deaf. This fact was emphasized again during the Covid-19 pandemic where they completely ignored the rights and well-being of the deaf person.

- Financial Planning: Further budget cuts the last few years have had devastating effects on Schools for the Deaf in SA. As one principal explained:

> "Most of my days are spent raising money to supplement the school budget, otherwise we can't give the

> children the education they need. Then we only have enough for teaching academics, there is nothing left for sport, culture, or leisure activities. That is why we have no extra-curricular activities or even playgrounds for the smaller children."

At another school, the principal said:

> "We amalgamated with a reform school for children and adolescents with behaviour and emotional problems, in order to have enough learners to keep the current budget allowance."

Because of the present state of the outcomes for deaf individuals in South Africa, and from the research data collected and findings, it is proposed, for the best short-term solution, that a specialised social-emotional program, taught by Deaf Teaching Assistants (DTA), be instituted by all schools for the deaf in South Africa.

Conclusions

Clearly, when there is a struggle to provide adequate developmental opportunities, deaf children and adolescents are at risk. According to the bio-ecological model, children and adolescents develop within various sociocultural systems which interact either to support or hinder their development. These ever changing (dynamic), nested systems can be described as different areas or particular environments/aspects of influence and is both distal (i.e., indirect) and proximal (i.e., direct) effect on the individual.

- An exceptionally large proportion of deaf children in South Africa arrive at school with little to no language and delays in social, emotional, and cognitive skills largely due to social isolation, due to late identification of their hearing loss as well as

language deprivation and inadequate stimulation in the home environment during the formative years.

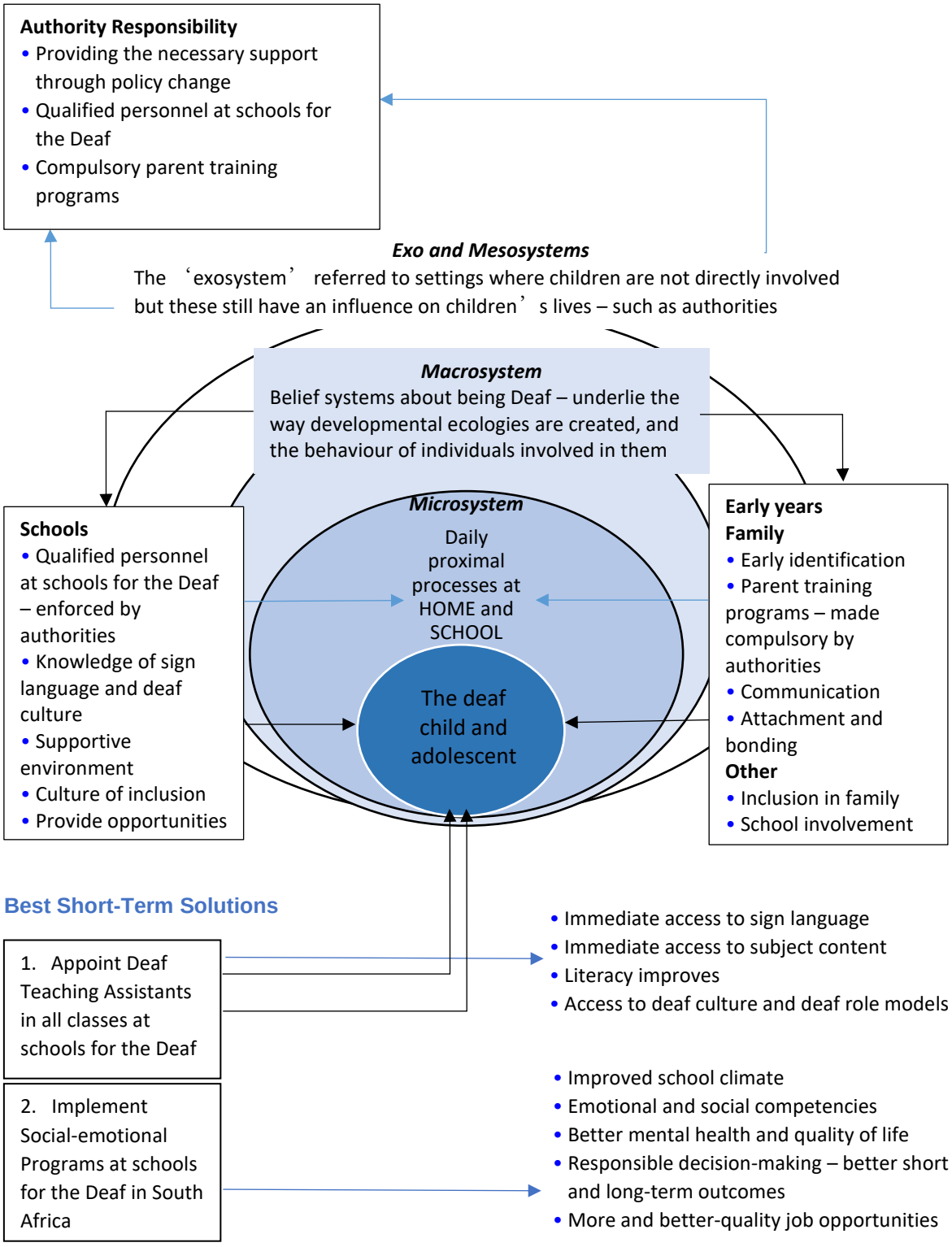
- SA schools for the Deaf lack contextually relevant resources. Principals and teachers have no knowledge of Sign Language and specialised training is not a pre-requisite.
- There is a correlation between a deaf child's language ability (verbal or signed) and his/her social-emotional maturity.
- Social-emotional competence support well-being.
- The research results showed lower well-being for the Adolescent in the higher grades.
- The results of the meta-analysis paper showed that children and adolescents with hearing loss will probably show a higher rate of emotional and behavioural problems compared to hearing controls.

Recommendations

For deaf children and adolescents to experience those factors which could lead to well-being or quality of life, the necessary opportunities and resources, within their environments, have to be provided (Gascon-Ramos, 2008). Children's development supports them with resources such as cognitive, linguistic and social emotional capacities that help them form images of self with which to face life's challenges, and so optimise their chances of developing a feeling of wellbeing. Veenhoven (2012) refers to this as deaf people's 'life-abilities' (Gascon-Ramos, 2008).

Figure 6

A Proposed System to Enhance the Well-being of SA Deaf Adolescents



Note. Figure created by Author: T Viljoen (2020).

Short-term Recommendations

- By employing **deaf teaching assistants**, the learners will have immediate access to Sign Language, to the content of their academic subjects – through the deaf teaching assistant translating into SA Sign Language, and to having deaf role models, providing a positive influence on the self. According to Bruner (1996) as cited in Storbeck (2012, p.69), a school is (supposed to be) "an entry into the culture and not just a preparation for it. As centrally instrumental in self-construction and nurturing of pupil's self-esteem", which plays a major role in subjective quality of life.
- **Social-Emotional Programmes**: Prevention and intervention programmes for school age youth have increased in the last 30 years with good results (Greenberg & Weissberg, 2001; Gascon-Ramos, 2008). Important is that social-emotional skills can be learned (Greenberg, 2006), and also, **that the domains identified by deaf adolescents (as indicated in the YQOL_DHH questionnaire) as important for their well-being, is likely to change with successful interventions** (Kushalnagar et al., 2011) – such as social-emotional programmes. Interventions focus mostly on the child, but the ecologies in which they develop have become an important part (Gascon-Ramos, 2008). In accordance with the bio-ecological theory, programmes where factors that lie outside the child, such as government interest, parenting skills and teacher support, were also addressed, were more effective in developing well-being in school-age children (Gascon-Ramos, 2008; Greenberg et al., 2000). This emphasized the necessity for holistic and comprehensive

The items which were included in the YQOL-DHH, had to meet the following criteria:
- the item evaluated a "quality" (perception/sensation/feeling),
- the item represented an area of importance to people with a hearing loss,
- *the item was likely to change with successful treatment of the condition,*
- the item was frequently mentioned by youth participants with a hearing loss,
- relevant to all youth with hearing loss or relevant to all youth who are deaf, and
- is a basic human need

perspectives that involves children and environment in understanding children's social and emotional development (Bronfenbrenner & Morris, 2006). Combined interventions where teacher and family behaviour are considered, as well as other people in the community, have enhanced the success of interventions with school age children (Greenberg, 2006). Figure 7 indicates how a Social-Emotional program can support Well-being.

- The development of a South African Council of Educators (SACE) course for Professional Development Points (PD poimts) for addressing the social-emotional problems of deaf and hard-of hearing children and adolescents. See figure 8 on page 122.

Medium-term Recommendations

- Appropriate Training of Teachers: Internationally, a masters degree is required to become a teacher of the Deaf, where in SA there are no pre-requisites, for teachers or principals alike ("SA Is Failing Deaf and Hard-of-Hearing Learners: Can a Bilingual Model of Education Be the Solution to Acquiring Literacy?," 2018).
Teachers should be fully trained to be able to support the "whole" deaf child. Apart from training in
    - the ortho-Didactics of Deaf education,
    - they need to have thorough knowledge of SA Sign Language, not just in fluency, but also in structure and theory,
    - educated in the social-emotional aspects of deaf children and adolescents, including knowledge, understanding and sensitivity towards Deaf culture and identity.
- Early parent training programmes made available to parents of deaf and hard of hearing babies and children – made compulsory by the appropriate authoritative body. An example of such a program is Hi Hopes programme, based on the Ski-Hi model of Early Intervention, which

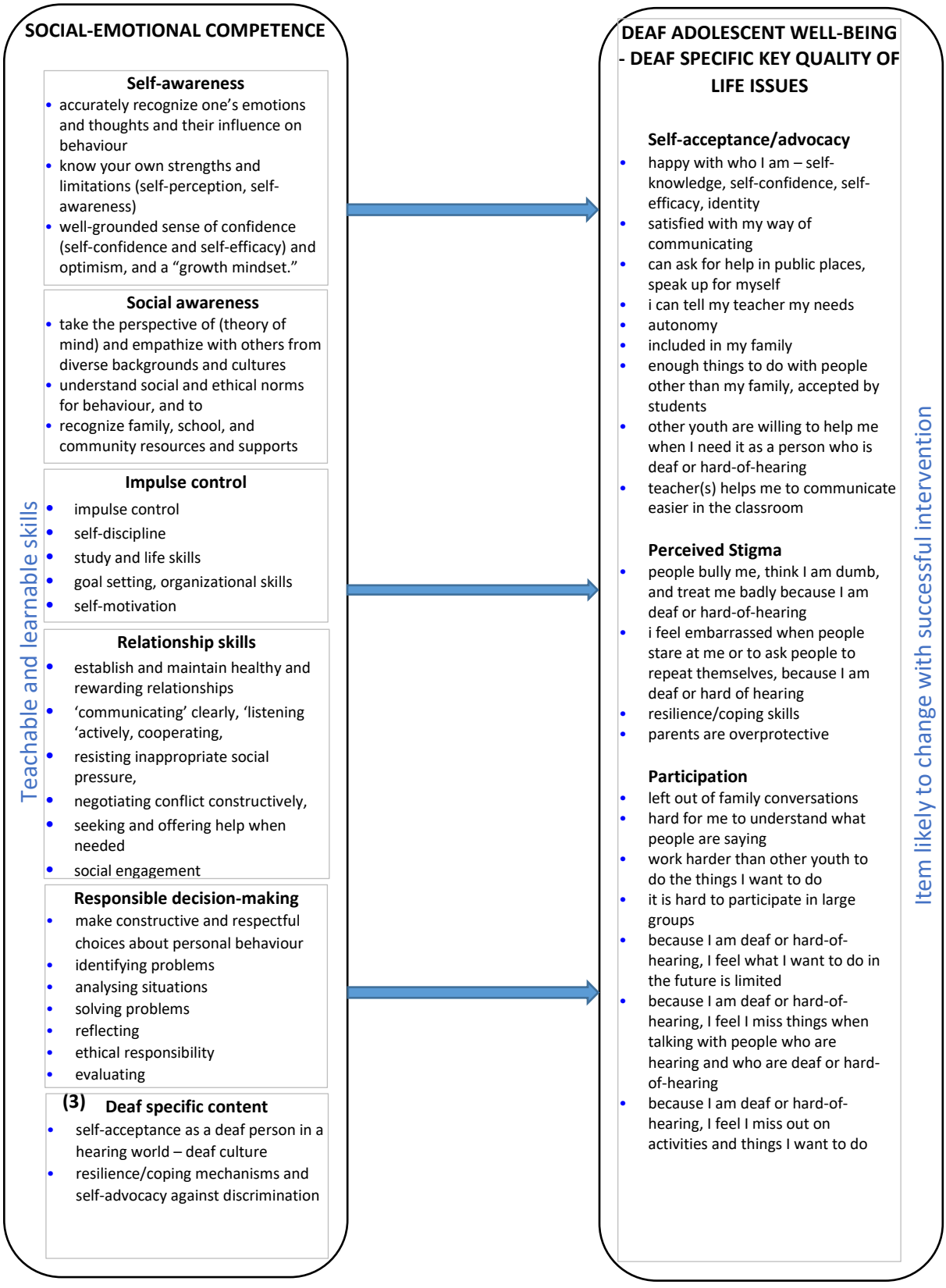
has been used internationally for 35 years. “The Centre for Deaf Studies launched the Hi Hopes early intervention programme to focus on the first three years of a child’s life which are the critical period for language and cognitive development” (*Hi Hopes - Wits University*, n.d.).

Long-term Recommendations

- Authorities in South Africa gravely fall short in providing adequate support for deaf children and adults alike, financially and in their policies concerning the Deaf.
- Changes necessary must include mandatory Deaf specialised training for teachers and principals at Schools for the Deaf in SA.
- Provide adequate financial budgets in order to prevent shortcomings in critical facilities and activities such as sport, culture, or leisure activities.
- Authorities should provide the necessary support through policy change “drawn up by the primary stakeholders … the financiers, the end-marketplace, education authorities and educators, the Deaf community at large, the deaf associations who carry responsibilities of deaf rights, parents of deaf children and the deaf students’ themselves” (Jürgens, 1997, as cited in Storbeck, 2012, p.141).

Figure 7

The Pathway from Social-Emotional Competence to Well-being



Note. Figure created by Author: T Viljoen (2020)

Limitations of the Study

Limitations in the study of deaf related research have been discussed extensively in chapter 4. The most important factors having an influence on the research, are limited statistics, heterogeneity of the deaf population due to levels of education, age of identification, additional disabilities, and research methodologies.

Additional limitations, specific to this dissertation study, were the use of convenience sampling and using UK cut-off values for the SDQ questionnaire.

Convenience sampling is a non-random sampling method employed when it is necessary to select the research sample from readily available sources. The drawbacks of convenience sampling are that it might not be typical of the national experience of deaf and hard of hearing youth. For this reason, a normal distribution could not be assumed, and non-parametric statistical methods had to be used. Although there is still value in the study, it could not be generalized to the population sample.

In a study done in South Africa, Vries et al. (2018) also used the SDQ assessment measure to assess the social and emotional behaviour of typical hearing children. Using the UK cut-off values for the South African sample led to extremely high rates of abnormal scores for Emotional Symptoms, Peer Problems and on Total Difficulties. The South African hearing adolescents rated 26 and 34% in the ‘abnormal’ range for emotional and peer problems, in contrast to the normative expectation of 10% (Vries et al., 2018). Although the SDQ has been used a number of times in Africa and South Africa, but the psychometric properties have not yet been assessed. Vries et al.,

(2018) recommended that studies should be done in South Africa where the SDQ used together with standardised clinical assessments. This can then be used to evaluate the sensitivity and reliability of SDQ-R scores in relation to a national clinical standard, to calculate South African appropriate cut-off values.

Final Comments

Although the study made use of convenience sampling, the results were comparable with the authors' personal and previous experience in Deaf related concerns. The mental health and well-being of deaf adolescents need to be addressed urgently.

Figure 8

A Framework for a Proposed SACE course for addressing the social-emotional problems of deaf and hard-of hearing children and adolescents

Section A: Provider Details

Name of Training Programme:	**Description of Training Programme**	**Contact person and details:**
A training programme for teachers and support staff to enhance the Social-Emotional achievement abilities of Deaf and Hard-of-Hearing persons.	Social-emotional competence serve as the support needed by deaf children and adolescents, and to empower them to develop the capacity to withstand the challenges they have to endure and lead to positive adult outcomes. Social-emotional training in SA schools for the Deaf are proposed as a pathway to well-being. This programme will assist teachers and support staff at schools for the Deaf and Full Service Schools to build a knowledge base of what social-emotional development is, and how it can lead to well-being.	Tasmé Viljoen E-mail: tazviljoen@gmail.com Mobile no: 082 454 9218

Section B: Activity Description

No	Social-Emotional Competence	Summary of the Activity's content and outcomes	Area of specialisation	Duration	Target Audience
1.	WHAT IS SOCIAL-EMOTIONAL COMPETENCE?	***Content:*** • What is the different areas of social-emotional competence: 1. Self-awareness - an awareness of own emotions, being able to recognize, identify and name feelings and understanding why specific feelings and accompanying behaviour is experienced. 2. Social-awareness - able to more accurately understand other people's thoughts and feelings, recognizing and accepting that another person's perspective, preference or viewpoint might differ from one's own. 3. Self-regulation and impulse control - the social-emotional skill of managing emotions;	Special Needs	Half day workshop.	Teachers and Support staff at schools for the Deaf and Full Service Schools.

		4. Relationship management - establish and maintain healthy and rewarding relationships. 5. Responsible decision-making - make constructive and respectful choices about personal behaviour; solving problems; and analysing situations. ***Outcomes:*** • To understand the vital, or core elements of social-emotional competence. • An understanding of the content and duration of SEL			
No	SEL Programmes	Summary of the Activity's content and outcomes	Area of specialisation	Duration	Target Audience

2.	SOCIAL-EMOTIONAL LEARNING (SEL) PROGRAMMES	***Content:***
		▪ Evidence-based Social-emotional programmes and learning (SEL). Two examples of these are:
		  ▪ The PATHS program. Developed to include deaf children.
		  ▪ HEALTHWISE – an adapted programmes for adolescents in south Africa.
		
		Outcomes:
		• An understanding of the content and duration of SEL programmes.
		• The order of teaching social-emotional skills.
			Special Needs	Half day workshop.	Teachers and Support staff at schools for the Deaf and Full Service Schools.

No	Social-Emotional Development	Summary of the Activity's content and outcomes	Area of specialisation	Duration	Target Audience
'3.	THE DEVELOPMENT OF SOCIAL-EMOTIONAL COMPETENCE	***Content:*** • The different developmental phases of social-emotional competence. • The social-emotional core elements in every developmental phase. ***Outcomes:*** • An understanding of how social-emotional competence develops through childhood and adolescence. • Knowledge of the importance of early and continued intervention.	Special Needs	Half day workshop.	Teachers and Support staff at schools for the Deaf and Full Service Schools.
No	The Role of Social-Emotional Development	Summary of the Activity's content and outcomes	Area of specialisation	Duration	Target Audience
4.	THE IMPORTANCE OF SOCIAL-EMOTIONAL COMPETENCE	***Content:*** • The influence of social-emotional competence on 1. well-being, 2. healthy development, 3. prevention of mental disorders, 4. academic enhancement and 5. adult outcomes. ***Outcomes:*** • An awareness of the consequences of delays in social-emotional competence.	Special Needs	Half day workshop.	Teachers and Support staff at schools for the Deaf and Full Service Schools.

No	Deaf Specific Social-Emotional Development Elements	Summary of the Activity's content and outcomes	Area of specialisation	Duration	Target Audience
5.	DEAF SPECIFIC ELEMENTS OF SOCIAL-EMOTIONAL DEVELOPMENT	***Content:*** • The impact of early contextual influences in deaf and hard-of-hearing children and adolescents' lives, on their social-emotional development. This will include: 1. Family relationships and bonding; and 2. The important role of early language input and continued perceived fluency of communication. ***Outcomes:*** • An understanding of how delayed language, social isolation and negative family circumstances such as a lack of close bonding with caregivers could negatively impact on a deaf child's social and emotional development.	Special Needs	Half day workshop.	Teachers and Support staff at schools for the Deaf and Full Service Schools.
No	The Role of the Educator	Summary of the Activity's content and outcomes	Area of specialisation	Duration	Target Audience
6.	THE ROLE OF THE TEACHERS AND SUPPORT STAFF IN SUCCESSFUL SEL (Social Emotional Learning)	***Content:*** • Teachers and Support staff as the key variables related to the success of social-emotional programmes. • Deaf teaching assistants as role models for deaf students supporting identity development. ***Outcomes:*** • An understanding of Teachers and Support staff of the vital role they play in supporting the successful teaching of social-emotional skills.	Special Needs	Half day workshop.	Teachers and Support staff at schools for the Deaf and Full Service Schools.

Note. A South African Council of Educators (SACE) course for Professional Development Points (PD points). Created by Author: T Viljoen (2020)

Bibliography

Allum, H. (2019, September 6). *Trauma-Informed Teaching From a Trauma Experienced Student*. Medium. https://medium.com/identity-education-and-power/trauma-informed-teaching-from-a-trauma-experienced-student-7d06ddad551c

Altman, D. G., & Bland, J. M. (1999). Statistics notes Variables and parameters. *BMJ*, *318*(7199), 1667. https://doi.org/10.1136/bmj.318.7199.1667

Arshavsky, Y. I. (2009). Two functions of early language experience. *Brain Research Reviews*, *60*(2), 327–340. https://doi.org/10.1016/j.brainresrev.2009.01.001

Bat-Chava, Y. (2000). Diversity of Deaf Identities. *American Annals of the Deaf*, *145*(5), 420–428. https://doi.org/10.1353/aad.2012.0176

Batchelor, M. (2010). The Teacher Experience: Deaf Education at Sizwile School: Challenges and Strengths. *American Annals of the Deaf*, *155*(4), 498–500.

Becker, B. E., & Luthar, S. S. (2002). Social-Emotional Factors Affecting Achievement Outcomes Among Disadvantaged Students: Closing the Achievement Gap. *Educational Psychologist*, *37*(4), 197–214. https://doi.org/10.1207/S15326985EP3704_1

Beckner, C. (2006, August 6). Can You Hear Me Now? *Sacramento News*. http://www.newsreview.com/sacramento/can-you-hear-me-now/content?oid=60673

Berk, L. E., & Churchill, J. L. (1996). *Infants, children, and adolescents*. Allyn and Bacon Boston. http://cf.linnbenton.edu/wed/ed/birdd/upload/Chapter%2006%20PP.pdf

Berk, Laura E. (2006). *Child Development*. Pearson/Allyn and Bacon.

Blanche, M. T., Blanche, M. J. T., Durrheim, K., & Painter, D. (2006). *Research in Practice: Applied Methods for the Social Sciences*. Juta and Company Ltd.

Bodner-Johnson, B. (1986). The Family Environment and Achievement of Deaf Students: A Discriminant Analysis. *Exceptional Children*, *52*(5), 443–449. https://doi.org/10.1177/001440298605200506

Bronfenbrenner, U., & Morris, P. A. (2006). The Bioecological Model of Human Development. In *Handbook of Child Psychology: Vol 1. Theoretical Models of human development* (6th ed.). Hoboken, NJ: Wiley. http://onlinelibrary.wiley.com/doi/10.1002/9780470147658.chpsy0114/abstract

Bronfenbrenner, Urie. (1999). Environments in developmental perspective: Theoretical and operational models. In S. L. Friedman & T. D. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts* (pp. 3–28). American Psychological Association.

Bronfenbrenner, Urie. (2005). *Making Human Beings Human: Bioecological Perspectives on Human Development*. SAGE Publications.

Bronfenbrenner, Urie, & Ceci, S. J. (1994). Nature-nuture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, *101*(4), 568–586. https://doi.org/10.1037/0033-295X.101.4.568

Bronfenbrenner, Urie, & Evans, G. W. (2000). Developmental Science in the 21st Century: Emerging Questions, Theoretical Models, Research Designs and Empirical Findings. *Social Development*, *9*(1), 115–125. https://doi.org/10.1111/1467-9507.00114

Bugental, D. B., & Grusec, J. E. (2007). Socialization Processes. In *Handbook of Child Psychology*. John Wiley & Sons, Inc. https://doi.org/10.1002/9780470147658.chpsy0307

Calderon, R. (2000). Parental involvement in deaf children's education programmes as a predictor of child's language, early reading, and social-emotional development. *Journal of Deaf Studies and Deaf Education*, *5*(2), 140–155.

Calderon, Rosemary, & Greenberg, M. (2011). Social and Emotional Development of Deaf Children: Family, School, and Program Effects. In *The Oxford Handbook of Deaf Studies, Language, and Education* (2nd ed., Vol. 2). Oxford University Press.

Callahan, M. (2020, May 28). *New challenges–and opportunities–for American Sign Language users during COVID-19*. https://news.northeastern.edu/2020/05/28/new-challenges-and-opportunities-for-american-sign-language-users-during-covid-19/

Campbell, R., MacSweeney, M., & Waters, D. (2007). Sign Language and the Brain: A Review. *Journal of Deaf Studies and Deaf Education*, *13*(1), 3–20. https://doi.org/10.1093/deafed/enm035

Casey, B. J., Jones, R. M., & Hare, T. A. (2008). The Adolescent Brain. *Annals of the New York Academy of Sciences*, *1124*, 111–126. https://doi.org/10.1196/annals.1440.010

Church, A. Ti., S. Katigbak, M., Locke, K., Zhang, H., Shen, J., Vargas Flores, J. de J., Ibáñez-Reyes, J., Tanaka-Matsumi, J., Curtis, G., F. Cabrera, H., Mastor, K., M. Alvarez, J., Ortiz, F., Simon, J.-Y., & M. Ching, C. (2013). Need Satisfaction and Well-Being. *Journal of Cross-Cultural Psychology*, *44*, 507–534. https://doi.org/10.1177/0022022112466590

Cicchetti, D. (2015). Neural plasticity, sensitive periods, and psychopathology. *Development and Psychopathology*, *27*(Special Issue 02), 319–320. https://doi.org/10.1017/S0954579415000012

Cicchetti, D., & Toth, S. L. (2014). *Internalizing and Externalizing Expressions of Dysfunction*. Psychology Press.

Cohen, J. (1999). *Educating Minds and Hearts: Social Emotional Learning and the Passage Into Adolescence*. Teachers College Press.

Convertino, C., Borgna, G., Marschark, M., & Durkin, A. (2014). Word and World Knowledge Among Deaf Learners With and Without Cochlear Implants. *Journal of Deaf Studies and Deaf Education*, *19*(4), 471–483. https://doi.org/10.1093/deafed/enu024

Damon, W., & Lerner, R. M. (2008). *Child and Adolescent Development: An Advanced Course*. John Wiley & Sons.

Dawes, A., Bray, R., & van der Merwe, A. (2007). *Monitoring Child Well-Being: A South African rights-based approach*. HRSC press. https://open.uct.ac.za/handle/11427/19773

De Wet, T. (2008). *Psychological Strengths and Disability: A Study on Hearing-Impaired Adults* [Masters Thesis]. University of South Africa.

DeHart, G. B., Sroufe, L. A., & Cooper, R. G. (2004). *Child Development, Its Nature & Course, 5th Edition* (5th edition). McGraw-Hill Humanities Social,.

Denham, S. A. (2007). Dealing with Feelings: How Children Negotiate the Worlds of Emotions and Social Relationships. *Romanian Association for Cognitive Science*, *XI*(1), 1–48.

Denham, S. A., Zinsser, K., & Bailey, C. (2011). *Emotional intelligence in the first five years of life*. http://www.child-encyclopedia.com/sites/default/files/textes-experts/en/638/emotional-intelligence-in-the-first-five-years-of-life.pdf

Denham, S., Bassett, H., & Wyatt, T. (2007). The Socialization of Emotional Competence. *Handbook of Socialization: Theory and Research*.

Desalew, A., Feto Gelano, T., Semahegn, A., Geda, B., & Ali, T. (2020). Childhood hearing impairment and its associated factors in sub-Saharan Africa in the 21st century: A systematic review and meta-analysis. *SAGE Open Medicine*, *8*, 2050312120919240. https://doi.org/10.1177/2050312120919240

Developing Adolescents: A Reference for Professionals. (2002). American Psychological Association.

Diener, E., Oishi, S., & Lucas, R. (2009). *Subjective Well-Being: The Science of Happiness and Life Satisfaction*. https://doi.org/10.1093/oxfordhb/9780195187243.013.0017

Edmondson, P. (2006). Deaf Children's Understanding of Other People's Thought Processes. *Educational Psychology in Practice*, *22*(2), 159–169. https://doi.org/10.1080/02667360600720146

Edwards, L. (2007). *Psychological Processes in Deaf Children with Complex Needs: An Evidence-Based Practical Guide* (1 edition). Jessica Kingsley Publishers.

Elias, M. J. (2003). *Academic and social-emotional learning*. International Academy of Education (IAE), Belgium, and the International Bureau of Education (IBE), Switzerland.

http://www.ibe.unesco.org/fileadmin/user_upload/archive/publications/EducationalPracticesSeriesPdf/prac11e.pdf

Elias, M. J., Zins, J. E., & Weissberg, R. (1997). *Promoting Social and Emotional Learning: Guidelines for Educators*. Association for Supervision & Curriculum Deve.

Fellinger, J., Holzinger, D., Sattel, H., & Laucht, M. (2008). Mental health and quality of life in deaf pupils. *European Child & Adolescent Psychiatry*, *17*(7), 414–423. https://doi.org/10.1007/s00787-008-0683-y

Ferjan Ramirez, N. (2013). Acquiring a first language in adolescence: : Behavioral and neuroimaging studies in American Sign Language. *EScholarship*. http://escholarship.org/uc/item/8d15d0f0

Gascon-Ramos, M. (2008). *Wellbeing in deaf children: A framework of understanding* (2nd ed., Vol. 25, pp. 57–71).

Greenberg, M., T., Domitrovich, C., & Bumbarger, B. (2000). *Preventing Mental Disorders in School-Age Children: A Review of the Effectiveness of Prevention Programmes*.

Greenberg, M. T., & Kusché, C. A. (1993). *Promoting social and emotional development in deaf children: The PATHS project.* University of Washington Press. http://psycnet.apa.org/psycinfo/1994-97112-000

Greenberg, M. T., Kusche, C. A., & Speltz, M. (1991). Emotional Regulation, self-control and Psychopathology: The role of relationships in early childhood. In *D. Cicchetti & S. Toth (Eds.), Rochester Symposium on Developmental Psychopathology* (Vol. 2, pp. 21–56). New York: Cambridge University Press.

Greenberg, Mark T. (2006). Promoting resilience in children and youth: Preventive interventions and their interface with neuroscience. *Annals of the New York Academy of Sciences*, *1094*, 139–150. https://doi.org/10.1196/annals.1376.013

Greenberg, Mark T., & Kusché, C. A. (1998). Preventive Intervention for School-Age Deaf Children: The PATHS Curriculum. *Journal of Deaf Studies and Deaf Education*, *3*(1), 49–63.

Greenberg, Mark T., Kusche, C. A., & Speltz, M. (2014). Internalizing and Externalizing Expressions of Dysfunction, Volume 2. In *Internalizing and Externalizing Expressions of Dysfunction, Volume 2* (pp. 57–90). Psychology Press.

Greenberg, Mark T., & Weissberg, R. (2001). Commentary on "Priorities for prevention research at NIMH." *Prevention & Treatment*, *4*(1), 25c. https://doi.org/10.1037/1522-3736.4.1.425c

Greenberg, Mark T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., & Elias, M. J. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist*, *58*(6–7), 466–474. https://doi.org/10.1037/0003-066X.58.6-7.466

Grote, H., & Izagaren, F. (2020, June 15). *Covid-19: The communication needs of D/deaf healthcare workers and patients are being forgotten*. The BMJ. https://blogs.bmj.com/bmj/2020/05/07/push-universal-mask-wearing-communication-needs-deaf-forgotten/

Halberstadt, A. G., Denham, S. A., & Dunsmore, J. C. (2001). Affective Social Competence. *Social Development*, *10*(1), 79–119.

Harney, P. (2007). Resilience Processes in Context. *Journal of Aggression, Maltreatment & Trauma*, *14*(3), 73–87. https://doi.org/10.1300/J146v14n03_05

Hi Hopes—Wits University. (n.d.). Retrieved January 30, 2021, from https://www.wits.ac.za/hi-hopes/

Hintermair, M. (2006). Parental Resources, Parental Stress, and Socioemotional Development of Deaf and Hard of Hearing Children. *Journal of Deaf Studies and Deaf Education*, *11*(4), 493–513. https://doi.org/10.1093/deafed/enl005

Hintermair, M. (2008). Self-esteem and Satisfaction With Life of Deaf and Hard-of-Hearing People—A Resource-Oriented Approach to Identity Work. *Journal of Deaf Studies and Deaf Education*, *13*(2), 278–300. https://doi.org/10.1093/deafed/enm054

Howell, D. (2009). *Statistical Methods for Psychology, International Edition* (International edition). Wadsworth.

Huitt, W., & Dawson, C. (2011). *Social development: Why it is important and how to impact it.* http://www.edpsycinteractive.org/papers/socdev.pdf

Humphrey, N. (2013). *Social and emotional learning: A critical appraisal*. SAGE.

Jacobs, Paul G. (2012). Deafness-Specific Tactic Knowledge: A New Understanding of Mental Health, and Social and Professional Participation. In W. Sittiprapaporn (Ed.), *Learning Disabilities*. InTech. http://www.intechopen.com/books/learning-disabilities/deafness-specific-tactic-knowledge-a-new-understanding-of-mental-health-and-social-and-professional-

Jacobs, Paul Gordon. (2010). Psychosocial Potential Maximization: A Framework of Proactive Psychosocial Attributes and Tactics Used by Individuals who are Deaf. *Volta Review*, *110*(1). http://search.ebscohost.com/login.aspx?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=00428639&AN=49757117&h=1Qu7TPSPSJAPdvTjzlcRWk8ZTn5CFJtqWOvUP9tIzk2IF%2B4FrYtb5wPDv19zbBj%2FL6tC%2FbdMePRQIUXl%2B2k5Ow%3D%3D&crl=c

Jambor, E., & Elliott, M. (2005). Self-esteem and Coping Strategies among Deaf Students. *Journal of Deaf Studies and Deaf Education*, *10*(1), 63–81. https://doi.org/10.1093/deafed/eni004

Jennifer J. Vogel-Walcut. (2007). *Social-Emotional Assessment of Deaf Children* [Florida State University]. http://diginole.lib.fsu.edu/cgi/viewcontent.cgi?article=5559&context=etd

Keenan, T., & Evans, S. (2009). *An Introduction to Child Development*. SAGE.

Kellough, R. D., & Kellough, N. G. (2008). *Teaching Young Adolescents: A Guide to Methods and Resources for Middle School Teaching, 5th Edition* (4th ed.). Pearson. /content/one-dot-com/one-dot-com/us/en/higher-education/program.html

Knoors, H., & Marschark, M. (2013). *Teaching Deaf Learners: Psychological and Developmental Foundations*. Oxford University Press, USA.

Knoors, H., & Vervloed, M. P. J. (2011, January 11). *Educational Programming for Deaf Children with Multiple Disabilities: Accommodating Special Needs*. The Oxford Handbook of Deaf Studies, Language, and Education, Volume 1, Second Edition. https://doi.org/10.1093/oxfordhb/9780199750986.013.0007

Knudsen, E. I. (2004). Sensitive periods in the development of the brain and behavior. *Journal of Cognitive Neuroscience*, *16*(8), 1412–1425. https://doi.org/10.1162/0898929042304796

Kusche, C. A., Garfield, T. S., & Greenberg, M. T. (1983). The Understanding of Emotional and Social Attributions in Deaf Adolescents. *Journal of Clinical Child Psychology*, *12*(2), 153.

Kushalnagar, P., Topolski, T. D., Schick, B., Edwards, T. C., Skalicky, A. M., & Patrick, D. L. (2011). Mode of Communication, Perceived Level of Understanding, and Perceived Quality of Life in Youth Who Are Deaf or Hard of Hearing. *Journal of Deaf Studies and Deaf Education*, *16*(4), 512–523. https://doi.org/10.1093/deafed/enr015

Kushalnagar, Poorna, Mathur, G., Moreland, C. J., Napoli, D. J., Osterling, W., Padden, C., & Rathmann, C. (2010). Infants and Children with Hearing Loss Need Early Language Access. *The Journal of Clinical Ethics*, *21*(2), 143–154.

LaRue, D. E., & Herrman, J. W. (2008). Adolescent stress through the eyes of high-risk teens. *Pediatric Nursing*, *34*(5), 375–380.

Leigh, I. W., Maxwell-McCaw, D., Bat-Chava, Y., & Christiansen, J. B. (2009). Correlates of Psychosocial Adjustment in Deaf Adolescents With and Without Cochlear Implants: A

Preliminary Investigation. *Journal of Deaf Studies and Deaf Education*, *14*(2), 244–259. https://doi.org/10.1093/deafed/enn038

Lenneberg, E. H. (1967). *BIOLOGICAL FOUNDATIONS OF LANGUAGE.* http://eric.ed.gov/?id=ED015480

Leventhal, T., & Brooks-Gunn, J. (2000). The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin*, *126*(2), 309–337.

Leybaert J & D'Hondt M. (2003). Neurolinguistic development in deaf children: The effect of early language experience. *International Journal of Audiology*, *42*, S34-40 1p.

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: Explanation and elaboration. *BMJ (Clinical Research Ed.)*, *339*, b2700. https://doi.org/10.1136/bmj.b2700

Lotter, E. (2020). *Going deaf – a story of gradual hearing loss*. Health24. https://www.news24.com/health24/Medical/Hearing-management/News/going-deaf-a-story-of-gradual-hearing-loss-20181003

Louw, D. A., & Louw, A. E. (2007). *Child and adolescent development*. Psychology publications.

Luckner, J. L., & Muir, S. (2001). Successful Students Who Are Deaf in General Education Settings. *American Annals of the Deaf*, *146*(5), 435–446. https://doi.org/10.1353/aad.2012.0202

Luckner, J. L., & Stewart, J. (2003). Self-Assessments and Other Perceptions of Successful Adults Who Are Deaf: An Initial Investigation. *American Annals of the Deaf*, *148*(3), 243–250. https://doi.org/10.1353/aad.2003.0020

Marcotte, A. C., & Morere, D. A. (1990). Speech lateralization in deaf populations: Evidence for a developmental critical period. *Brain and Language*, *39*(1), 134–152. https://doi.org/10.1016/0093-934X(90)90008-5

Mark Greenberg. (n.d.). Retrieved January 15, 2021, from https://casel.org/board-of-directors/mark-greenberg/

Marschark, M. (1997). *Psychological Development of Deaf Children* (Reprint edition). Oxford University Press.

Marschark, M. (2001). *Language Development in Children Who Are Deaf: A Research Synthesis.* http://eric.ed.gov/?id=ED455620

Marschark, M., & Clark, M. D. (1993). *Psychological perspectives on deafness. [1] (1993)*. Routledge.

Marschark, M., & Spencer, P. (2009). Evidence of best practice models and outcomes in the education of deaf and hard-of-hearing children: An international review. *Trim: National Council for Special Education*. http://www.nabmse.org/wp/wp-content/uploads/downloads/2012/07/1_NCSE_Deaf.pdf

Marschark, M., & Spencer, P. E. (2003). *Oxford Handbook of Deaf Studies, Language, and Education*. Oxford University Press.

Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, *56*(3), 227–238. https://doi.org/10.1037/0003-066X.56.3.227

Masten, A. S. (2016). Developmental psychopathology: Pathways to the future: *International Journal of Behavioral Development*. https://doi.org/10.1177/0165025406059974

Mayberry, R. I. (2002). Cognitive development in deaf children: The interface of language and perception in neuropsychology. *Handbook of Neuropsychology*, *8*(Part II), 71–107.

Mayberry, R. I., Chen, J.-K., Witcher, P., & Klein, D. (2011). Age of acquisition effects on the functional organization of language in the adult brain. *Brain and Language*, *119*(1), 16–29. https://doi.org/10.1016/j.bandl.2011.05.007

Mayberry, R. I., & Eichen, E. B. (1991). The long-lasting advantage of learning Sign Language in childhood: Another look at the critical period for language acquisition. *Journal of Memory and Language*, *30*(4), 486–512. https://doi.org/10.1016/0749-596X(91)90018-F

McCullough, G., & Heubner, S. (2003). Life Satisfaction Reports of Adolescents with Learning Disabilities and Normally Achieving Adolescents—Gable McCullough, E. Scott Huebner, 2003. *Journal of Psychoeducational Assessment*, *21*(3). https://journals.sagepub.com/doi/abs/10.1177/073428290302100401

McIlroy, G., & Storbeck, C. (2011). Development of Deaf Identity: An Ethnographic Study. *Journal of Deaf Studies and Deaf Education*, *16*(4), 494–511. https://doi.org/10.1093/deafed/enr017

Mcilroy, G. W. (2008). *A Narrative Exploration Of Educational Experiences On Deaf Identity*.

Meadow, K. P. (2005). Early Manual Communication in Relation to the Deaf Child's Intellectual, Social, and Communicative Functioning. *Journal of Deaf Studies and Deaf Education*, *10*(4), 321–329. https://doi.org/10.1093/deafed/eni035

Miller, P., Kargin, T., Guldenoglu, B., Rathmann, C., Kubus, O., Hauser, P., & Spurgeon, E. (2012). Factors Distinguishing Skilled and Less Skilled Deaf Readers: Evidence From Four Orthographies. *Journal of Deaf Studies and Deaf Education*, *17*(4), 439–462. https://doi.org/10.1093/deafed/ens022

Moeller, M. P. (2000). Early intervention and language development in children who are deaf and hard of hearing. *Pediatrics*, *106*(3), e43–e43.

Moores, D. F. (1996). *Educating the Deaf: Psychology, Principles, and Practices*. Houghton Mifflin.

Mulwafu, W., Kuper, H., & Ensink, R. J. H. (2016). Prevalence and causes of hearing impairment in Africa. *Tropical Medicine & International Health: TM & IH*, *21*(2), 158–165. https://doi.org/10.1111/tmi.12640

Neal, J. W., & Neal, Z. P. (2013). Nested or Networked? Future Directions for Ecological Systems Theory. *Social Development*, *22*(4), 722–737. https://doi.org/10.1111/sode.12018

Nelson. (2001). Neural plasticity and human development: The role of early experience in sculpting memory systems—Nelson—2001—Developmental Science—Wiley Online Library. *Developmental Science*, *3*(1). http://onlinelibrary.wiley.com/doi/10.1111/1467-7687.00104/abstract;jsessionid=A706F2A48933087A1AEE827AE6D22D22.f02t02

Newman, B. M., & Newman, P. R. (2015). *Theories of Human Development*. Psychology Press.

Newman, B., & Newman, P. (2011). *Development Through Life: A Psychosocial Approach*. Cengage Learning.

Niclasen, J., & Dammeyer, J. (2016). Psychometric Properties of the Strengths and Difficulties Questionnaire and Mental Health Problems Among Children With Hearing Loss. *The Journal of Deaf Studies and Deaf Education*, *21*(2), 129–140. https://doi.org/10.1093/deafed/env067

Niclasen, J., Skovgaard, A. M., Andersen, A.-M. N., Sømhovd, M. J., & Obel, C. (2013). A Confirmatory Approach to Examining the Factor Structure of the Strengths and Difficulties Questionnaire (SDQ): A Large Scale Cohort Study. *Journal of Abnormal Child Psychology*, *41*(3), 355–365. https://doi.org/10.1007/s10802-012-9683-y

Nine Things Educators Need to Know About the Brain, by Louis Cozolino. (n.d.). Retrieved August 1, 2016, from http://www.dailygood.org/story/441/nine-things-educators-need-to-know-about-the-brain-louis-cozolino/

OECD. (2015). *Skills for Social Progress*. OECD Publishing. http://www.oecd-ilibrary.org/education/skills-for-social-progress_9789264226159-en

Parkin, I. (2010). Factors Affecting Deaf Education in South Africa. *American Annals of the Deaf*, *155*(4), 490–493.

Parritz, R., & Troy, M. (2013). *Disorders of Childhood: Development and Psychopathology*. Cengage Learning.

Patrick, D. L., Edwards, T. C., Skalicky, A. H., Schick, B., Topolski, T. D., Kushalnagar, P., Leng, M., O'Neill-Kemp, A. M., & Sie, K. (2011). Validation of a Quality-of-Life Measure for Deaf or Hard of Hearing Youth. *Otolaryngology--Head and Neck Surgery : Official Journal of American Academy of Otolaryngology-Head and Neck Surgery*, *145*(1), 137–145. https://doi.org/10.1177/0194599810397604

Pavot, W., & Diener, E. (2008). The Satisfaction With Life Scale and the emerging construct of life satisfaction. *The Journal of Positive Psychology*, *3*(2), 137–152. https://doi.org/10.1080/17439760701756946

Petersen, L., & Rems-Smario, J. (2014). Applying Maslow's Hierarchy. *THRIVE - Deaf Teens California School for the Deaf (CSD)*, *1*. https://issuu.com/csdthrive/docs/csdmagazine_360d9f5c54f2de

Ramírez, N. F., Leonard, M. K., Halgren, E., & Mayberry, R. I. (2013). The Neural Correlates of Childhood Linguistic Isolation. *Cascadilla Press*. http://grammar.ucsd.edu/mayberrylab/papers/FerjanRamirez_etal13_BULCD.pdf

Real South African Sign Language. (2020). Real SASL. https://www.realsasl.com/25-learn-sign-language/117-five-parameters-of-south-african-sign-language

Reicher, H. (2010). Building inclusive education on social and emotional learning: Challenges and perspectives – a review. *International Journal of Inclusive Education*, *14*(3), 213–246. https://doi.org/10.1080/13603110802504218

Rhoades, E. A., & Duncan, J. (2010). *Auditory-verbal Practice: Toward a Family-centered Approach*. Charles C Thomas Publisher.

Roeser, R. W., Eccles, J. S., & Sameroff, A. J. (1998). Academic and emotional functioning in early adolescence: Longitudinal relations, patterns, and prediction by experience in middle school. *Development and Psychopathology*, *10*(02), 321–352.

Rosa, E. M., & Tudge, J. (2013). Urie Bronfenbrenner's Theory of Human Development: Its Evolution From Ecology to Bioecology. *Journal of Family Theory & Review*, *5*(4), 243–258. https://doi.org/10.1111/jftr.12022

Rose-Krasnor, L. (1997). The Nature of Social Competence: A Theoretical Review. *Social Development*, *6*(1), 111–135. https://doi.org/10.1111/j.1467-9507.1997.tb00097.x

Rutter, M. (1989). Pathways from Childhood to Adult Life. *Journal of Child Psychology and Psychiatry*, *30*(1), 23–51. https://doi.org/10.1111/j.1469-7610.1989.tb00768.x

SA is failing deaf and hard-of-hearing learners: Can a bilingual model of education be the solution to acquiring literacy? (2018). *HSRC Review*. http://www.hsrc.ac.za/en/review/hsrc-review-oct-dec-2018/sa-is-failing-deaf-and-hard-of-hearing-learners

Saarni, C. (2011). Emotional Development in Childhood. In *Encyclopedia on Early Childhood Development*. Sonoma State University.

Saarni, C, Campos, J., Camras, L. A., & Witherington, D. (2006). Emotional Development: Action, Communication, and Understanding. In *Handbook of child psychology* (6th ed., Vol. 3, pp. 226–299). John Wiley & Sons, Inc.

Saarni, Carolyn. (2001). Cognition, Context, and Goals: Significant Components in Social-Emotional Effectiveness. *Social Development*, *10*(1), 125–129.

Salovey, P., & Mayer, J. D. (1990). Emotional Intelligence. *Imagination, Cognition and Personality*, *9*(3), 185–211. https://doi.org/10.2190/DUGG-P24E-52WK-6CDG

Smal, D. P. J. (2015). *PROPOSAL REGARDING THE TRAINING OF DEAF TEACHING ASSISTANTS TO BECOME EFFECTIVE SOUTH AFRICAN SIGN LANGUAGE CO-TEACHERS.* DEVELOPMENT INSTITUTE FOR THE DEAF AND BLIND (DIDB).

Smit, A. L., & Henderson, M. (2010). Mental Health and the Deaf Community. *American Annals of the Deaf*, *155*(4), 517–518.

Stevenson, J., Kreppner, J., Pimperton, H., Worsfold, S., & Kennedy, C. (2015). Emotional and behavioural difficulties in children and adolescents with hearing impairment: A systematic review and meta-analysis. *European Child & Adolescent Psychiatry*, *24*(5), 477–496. https://doi.org/10.1007/s00787-015-0697-1

Storbeck, C. (2012). *A professional development programme for teachers of the deaf in South Africa* [Thesis]. http://ujdigispace.uj.ac.za/handle/10210/6151

Stump, K. N., Ratliff, J. M., Wu, Y. P., & Hawley, P. H. (2009). Theories of social competence from the top-down to the bottom-up: A case for considering foundational human needs. In *Social behavior and skills in children* (pp. 23–37). Springer Science + Business Media.

Swanepoel, B. (2012). *An investigation of two different modalities of language used in an educational setting and the behaviour of deaf learners.* [Thesis]. http://wiredspace.wits.ac.za/handle/10539/11898

Swanepoel, D., Störbeck, C., & Friedland, P. (2009). Early hearing detection and intervention in South Africa. *International Journal of Pediatric Otorhinolaryngology*, *73*(6), 783–786. https://doi.org/10.1016/j.ijporl.2009.01.007

Thorne, K. J., & Kohut, C. S. (2007). Prince-Embury, S. (2007, 2006). Resiliency Scales for Children and Adolescents: A Profile of Personal Strengths. San Antonio,TX: Harcourt Assessment, Inc. *Canadian Journal of School Psychology*, *22*(2), 255–261. https://doi.org/10.1177/0829573507305520

Tudge, J. (2008). Cultural?Ecological Theory and Its Implications for Research. In *The Everyday Lives of Young Children*. Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511499890.004

Tudge, J. (2009). Uses and Misuses of Bronfenbrenner's Bioecological Theory of Human Development. *Journal of Family Theory & Review*, *1*(4), 198–210. https://doi.org/10.1111/j.1756-2589.2009.00026.x

Tudge, J. R. H., Payir, A., Merçon-Vargas, E., Cao, H., Liang, Y., Li, J., & O'Brien, L. (2016). Still Misused After All These Years? A Reevaluation of the Uses of Bronfenbrenner's Bioecological Theory of Human Development. *Journal of Family Theory & Review*, *8*(4), 427–445. https://doi.org/10.1111/jftr.12165

Vaccari, C., & Marschark, M. (1997). Communication between Parents and Deaf Children: Implications for Social-emotional Development. *Journal of Child Psychology and Psychiatry*, *38*(7), 793–801. https://doi.org/10.1111/j.1469-7610.1997.tb01597.x

Veenhoven, R. (2012). Happiness: Also Known as "Life Satisfaction" and "Subjective Well-Being." In K. C. Land, A. C. Michalos, & M. J. Sirgy (Eds.), *Handbook of Social Indicators and Quality of Life Research* (pp. 63–77). Springer Netherlands. https://doi.org/10.1007/978-94-007-2421-1_3

Vries, P. J. de, Davids, E. L., Mathews, C., & Aarø, L. E. (2018). Measuring adolescent mental health around the globe: Psychometric properties of the self-report Strengths and Difficulties Questionnaire in South Africa, and comparison with UK, Australian and Chinese data. *Epidemiology and Psychiatric Sciences*, *27*(4), 369–380. https://doi.org/10.1017/S2045796016001207

Waters, E., & Sroufe, L. A. (1983). Social competence as a developmental construct. *Developmental Review*, *3*(1), 79–97. https://doi.org/10.1016/0273-2297(83)90010-2

What Is SEL? (2013, April 21). CASEL. http://casel.org/guide/what-is-sel/

White, F., Livesey, D., & Hayes, B. (2012). *Developmental Psychology: From Infancy to Development*. Pearson Higher Education AU.

Wissing, M. P. (2013). *Well-Being Research in South Africa*. Springer.

World Health Organization. (2013). *Investing in mental health Evidence for action*. World Health Organization. https://www.who.int/mental_health/publications/financing/investing_in_mh_2013/en/

Zand, D. H., & Pierce, Katherine J. (2011). *Resilience in Deaf Children: Adaptation Through Emerging Adulthood*. Springer Science + Business Media.